EyeMax 9000 Series
DVR Manual

Rev 1.0

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CHAPTER 1
HARDWARE Specification

1. Product Specification

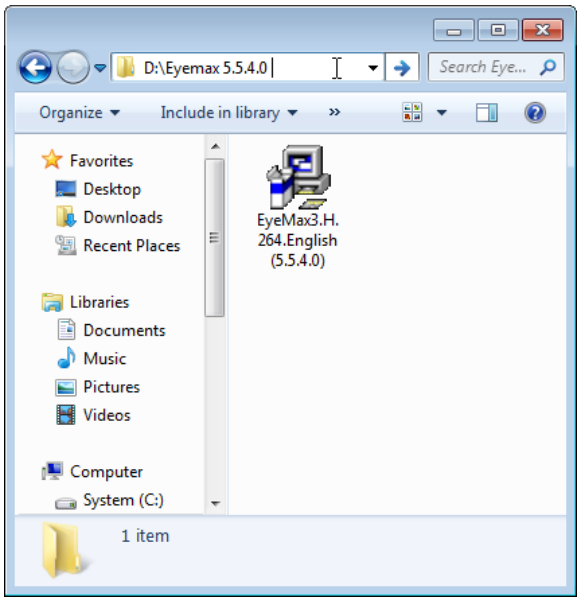
Models	9030	9060	9120	9240	9448	9632	X948
Displaying Speed (NTSC)	30fps	60fps	120fps	240fps	480fps	960fps	480fps
Recording Speed (NTSC)	30fps	60fps	120fps	240fps	480fps	480fps	480fps
Video Inputs	4	16	16	16	16	32	16
Audio Inputs	1	2	4	8	16	16	16
Sensor Inputs	4	4	16	16	16	16	16
Alarm Outputs	2	2	8	8	8	8	8
Video Resolution	D1 / Half D1 / CIF						
Compression Type	MPEG4 / H.264 (Software Codec)						H.264 (Hardware Codec)
Supported Signal Types	NTSC / PAL						
Supported Network	TCP/IP, PSTN						
Supported Backup Devices	HDD, DVD/R, CD/RW, Network Driver, etc.						
Supported PTZ Protocols	C&B Tech-CND100200&SMART, Changzhou Minking-Minking, CTNCom-HD0670, Dong Yang Unitech-DSC230, DRAGON-DRAGON, Dynacolor-TPD7720, Geosan-GRX1000, GOLDENEYE-GOLDENEYE, InterM-VRX2201, KALATEL-KTD312, KJK-KJK, LG-LPTA100L, PELCO D&P, SAMSUNG-SCC641&SDZ160R&SPD1600&SPX1000&SPT1000, SONY-EVID3031, Vicon-Survey&2000, ZITEC-ZITECH, etc.						
Operating Systems	Windows XP, Windows 7						

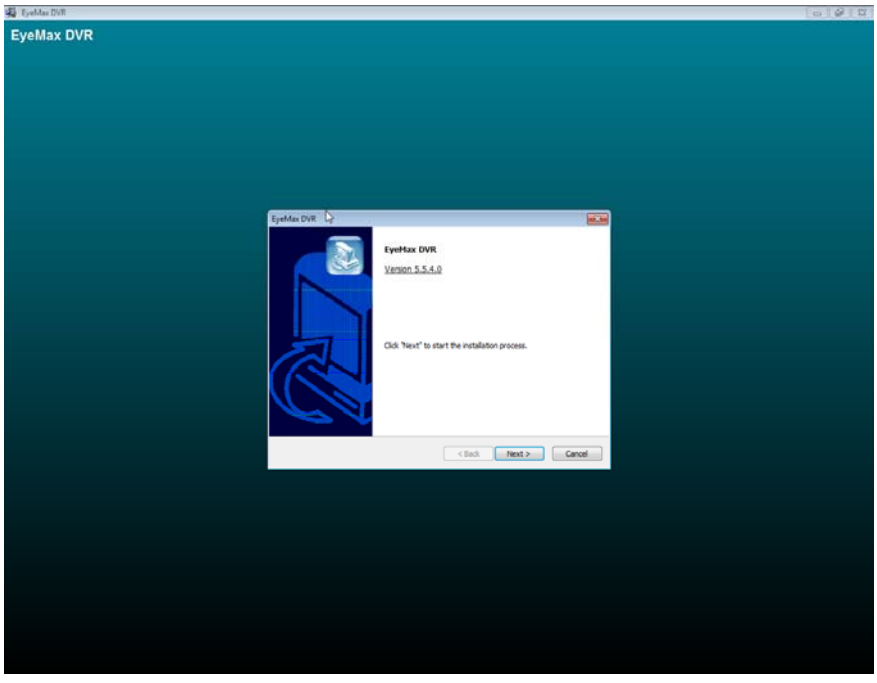
- Specification may change without notice

CHAPTER 2
Software Installation

Steps:

1. Insert EyeMax S/W.
2. Double-click “EyeMax.English(5.5.4.0)”.

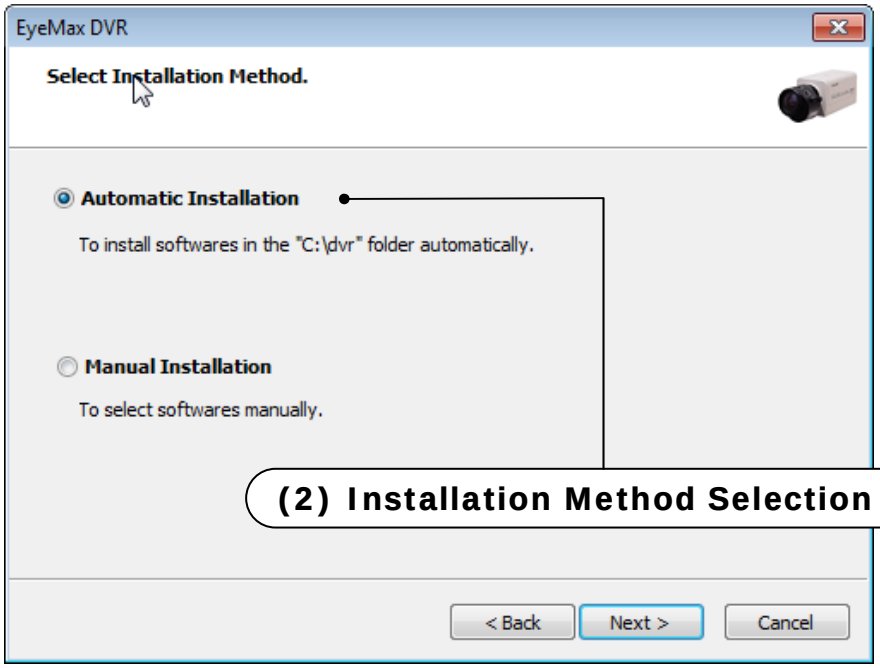




1. Automatic Installation

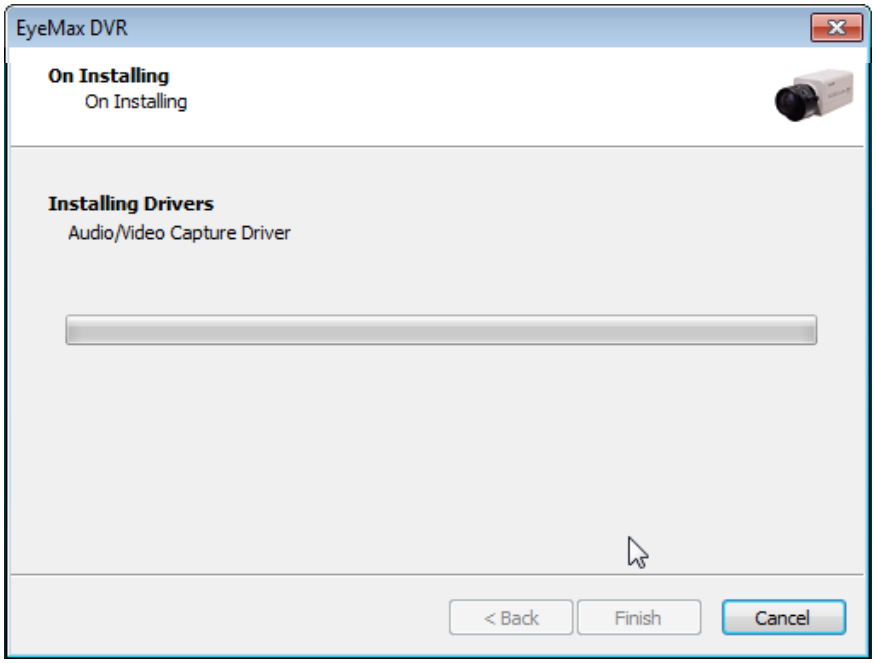
(1) Definition

It is a method to install all the relevant software automatically.
Select “Automatic Installation” at all times unless only “Client Software” is to be installed.

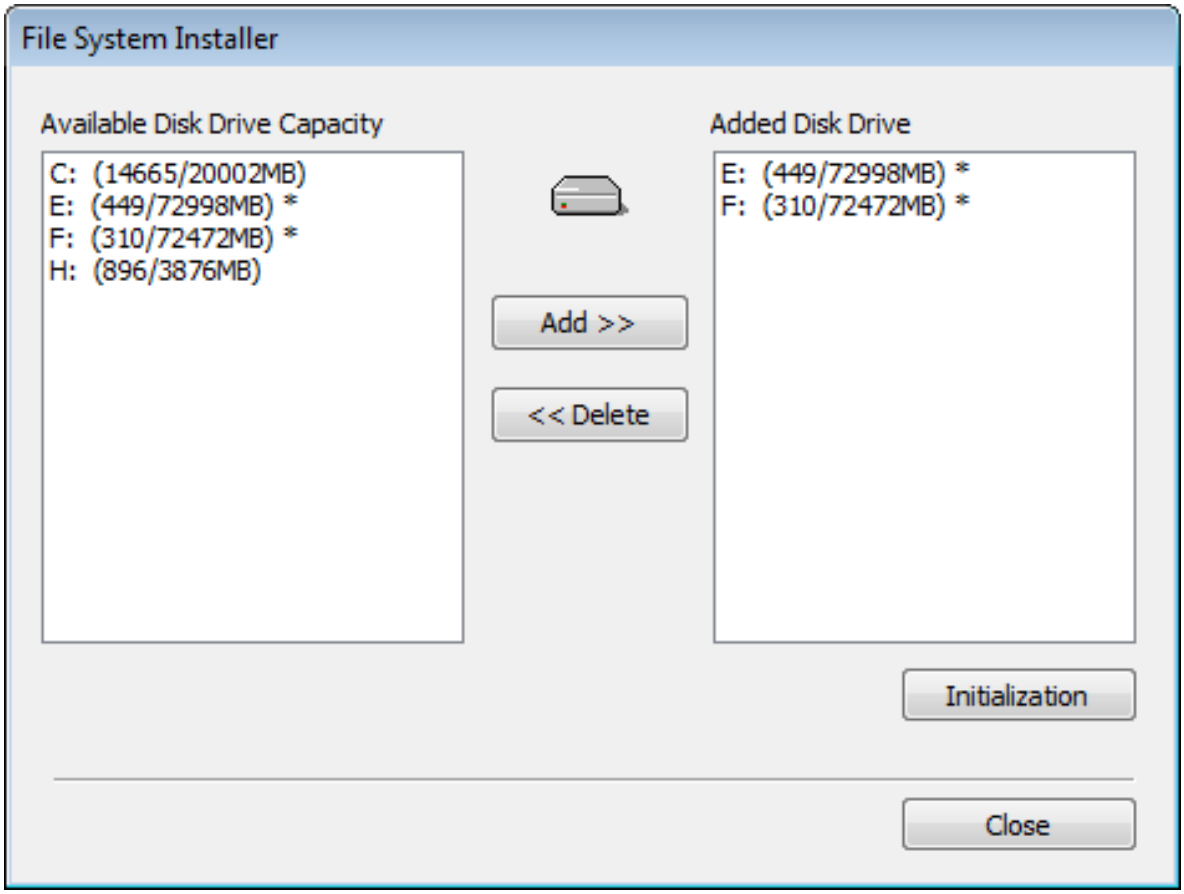


(2) Installation Method Selection

(3) Installing Drivers



(4) DVR File System Installation



Definition:

Occupying disk capacity to record data

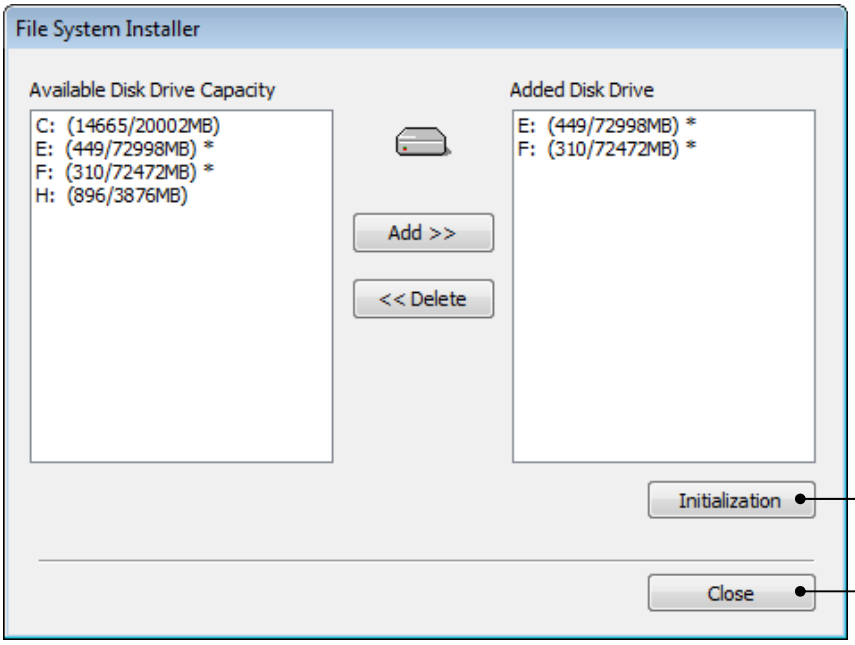
Steps:

1. Select drives from “Available Disk Drive Capacity”
2. Click “Add”.
3. Click “Initialization”.

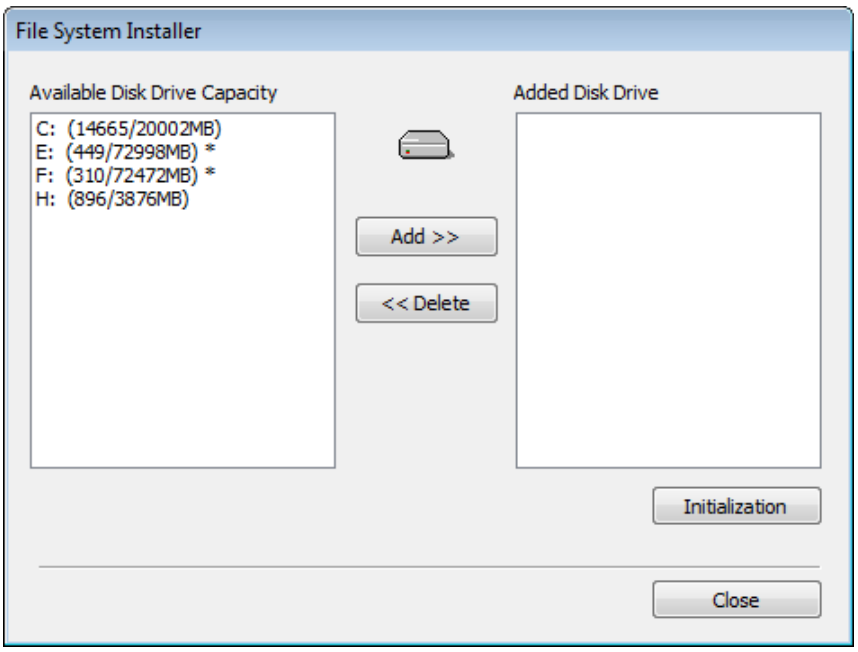
Caution:

1. “C Drive” cannot be added to DFS disk, it is used for O/S and DVR software.
2. HDD has to be initialized to record data

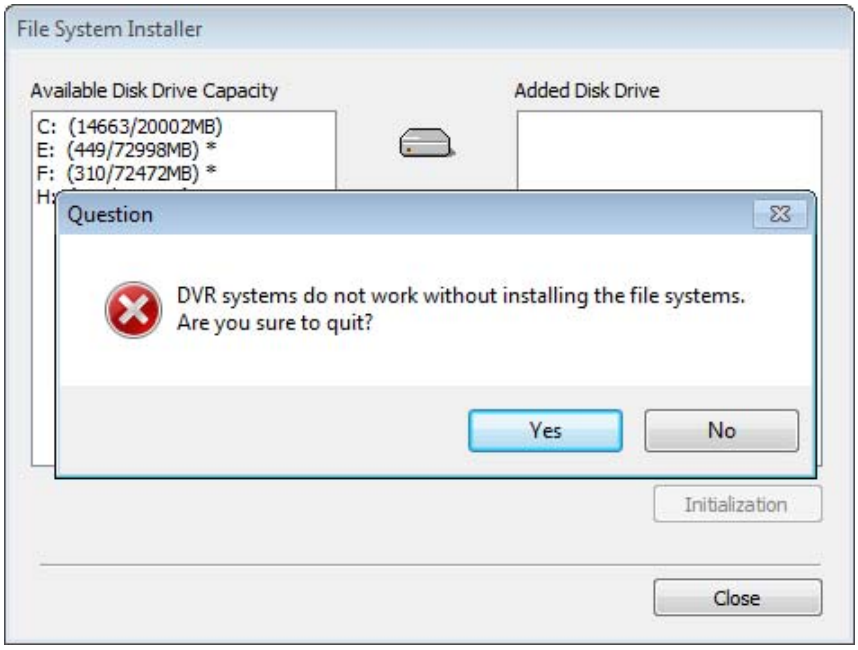
Selecting “Quick Initialization” will lead to the initialization of entire disk capacity added. Otherwise, put in desirable number to initialize. Note that the number can not exceed total capacity added.
Initializing With Archiving the Data: This is to increase DFS storage by taking additional space from the current “Reserved Capacity”. So new value for “Reserved Capacity” can not exceed the current one.
Minimum 300MB is recommended for DVR performance.

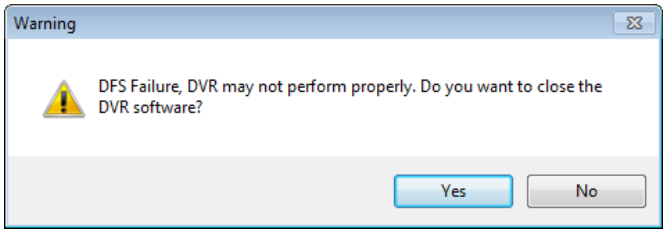


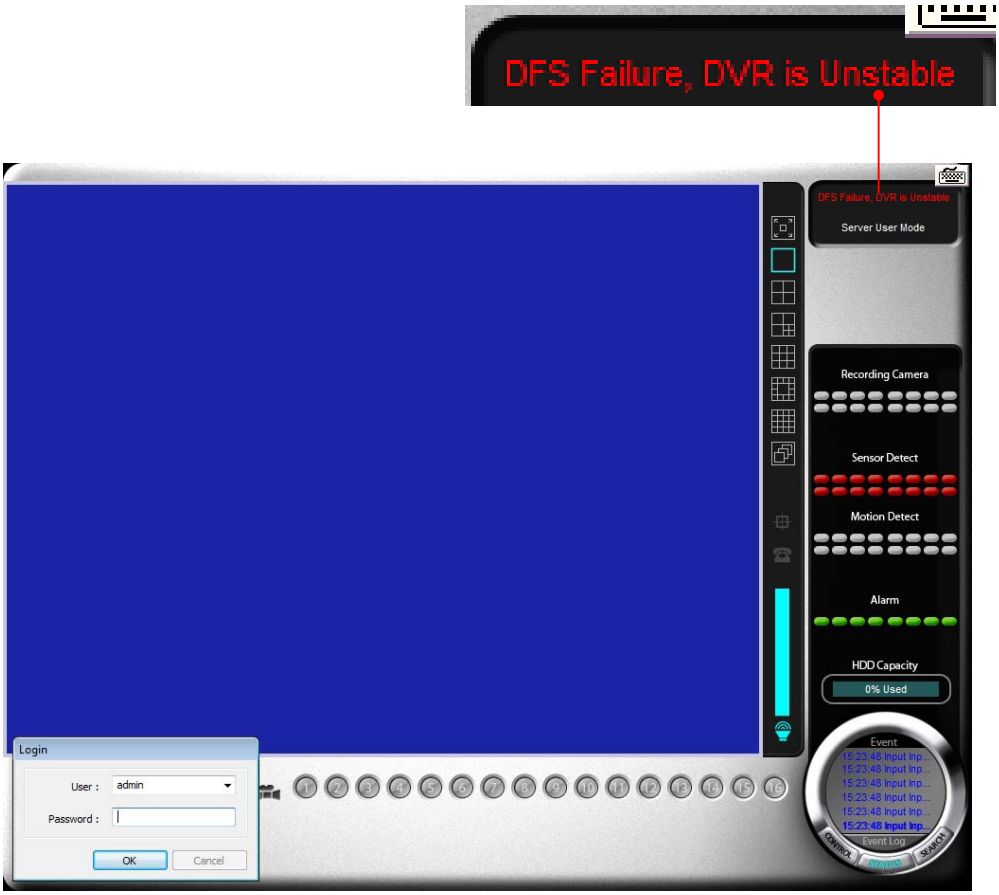
Initialization process will be performed automatically. Click “Close” upon completion.



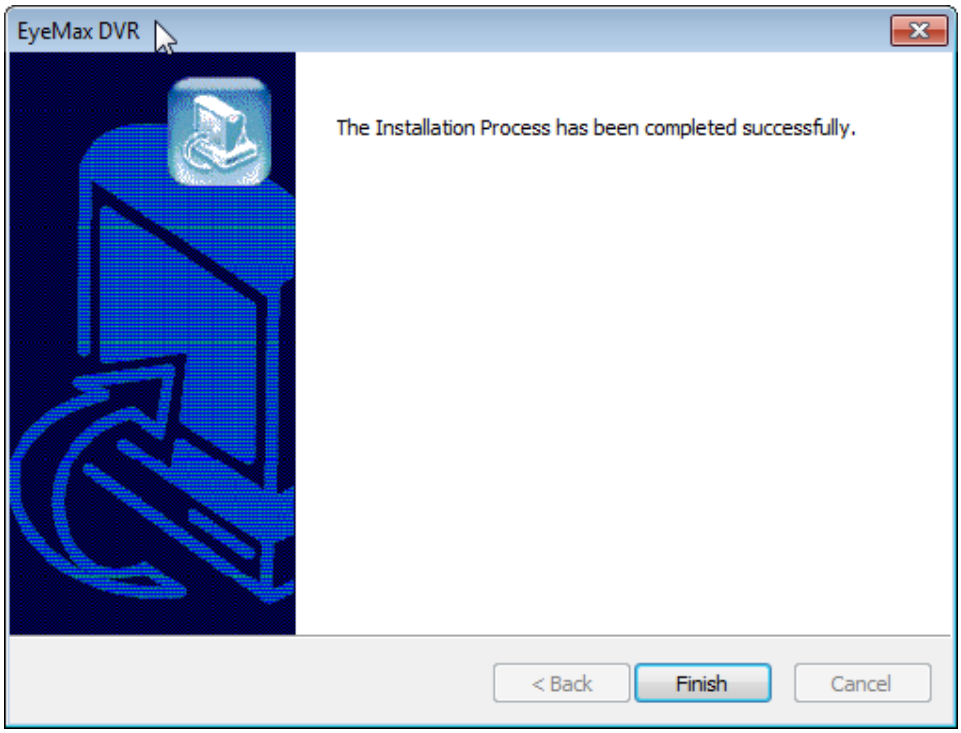
At least one of “available disk drive” must be added for data storage. Otherwise, the alert message will pop up.







(5) Completion & Retry

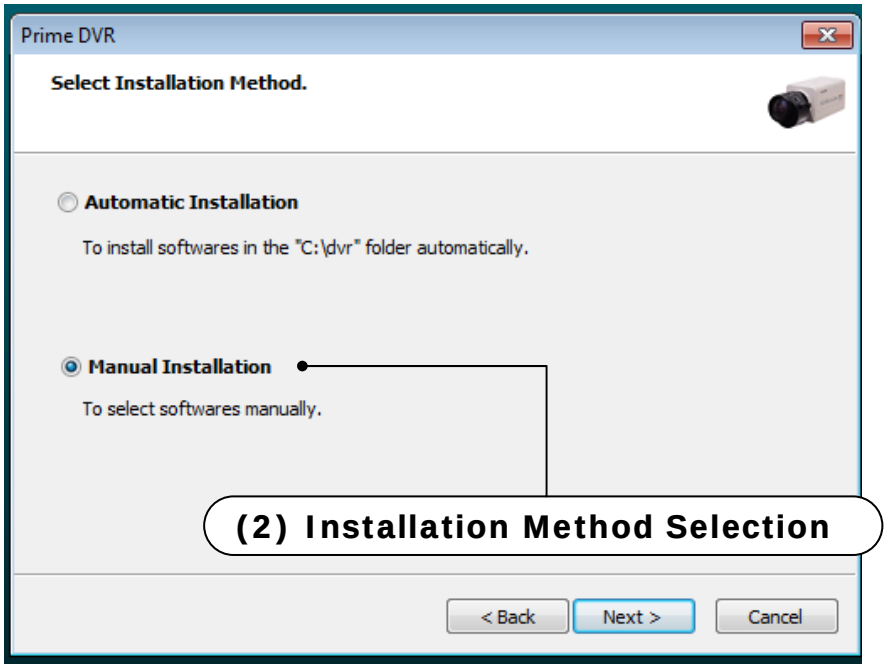


Retry the entire procedure if an error message is displayed.

2. Manual Installation

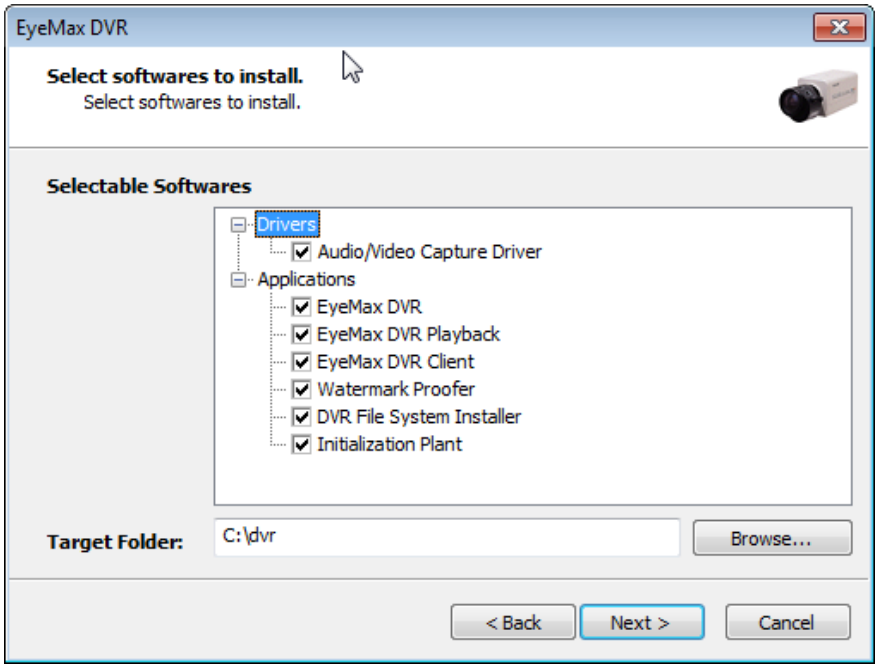
(1) Definition

It is a method to install selected software manually.
Select “Manual Installation” only in the case of “Client Software” installation.



(2) Installation Method Selection

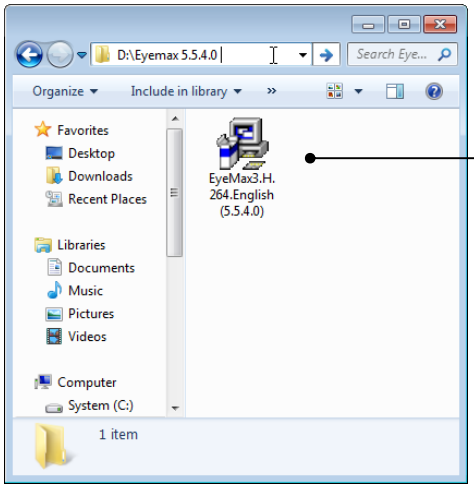
(3) Software Selection



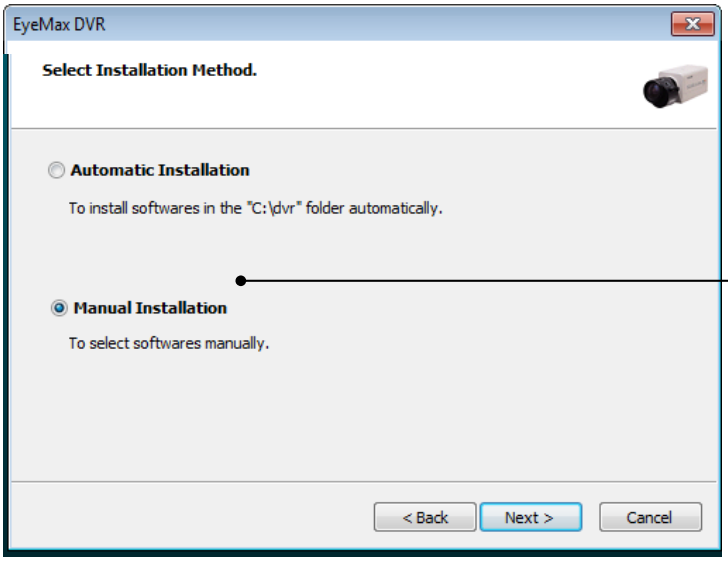
Note: The rest of the procedures are the same as “Automatic Installation”.

3.Remote Client Installation

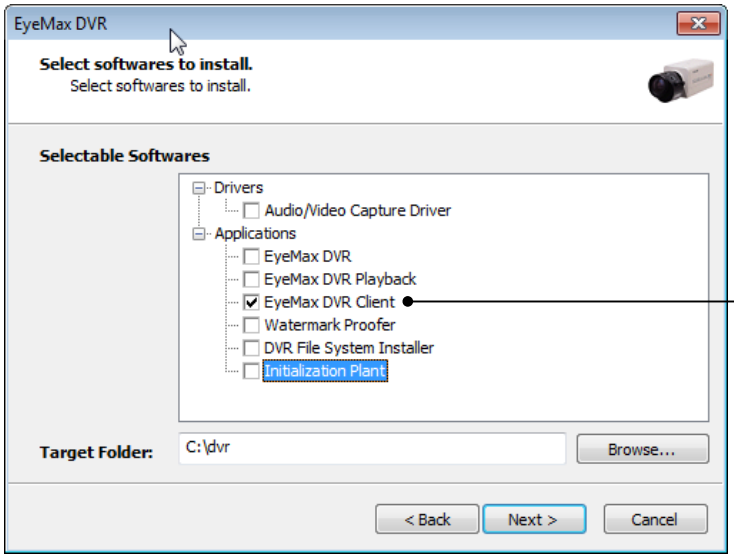
(1) Using EyeMax S/W



Double-click
"Eyemax.English(5.5.4.0).exe".

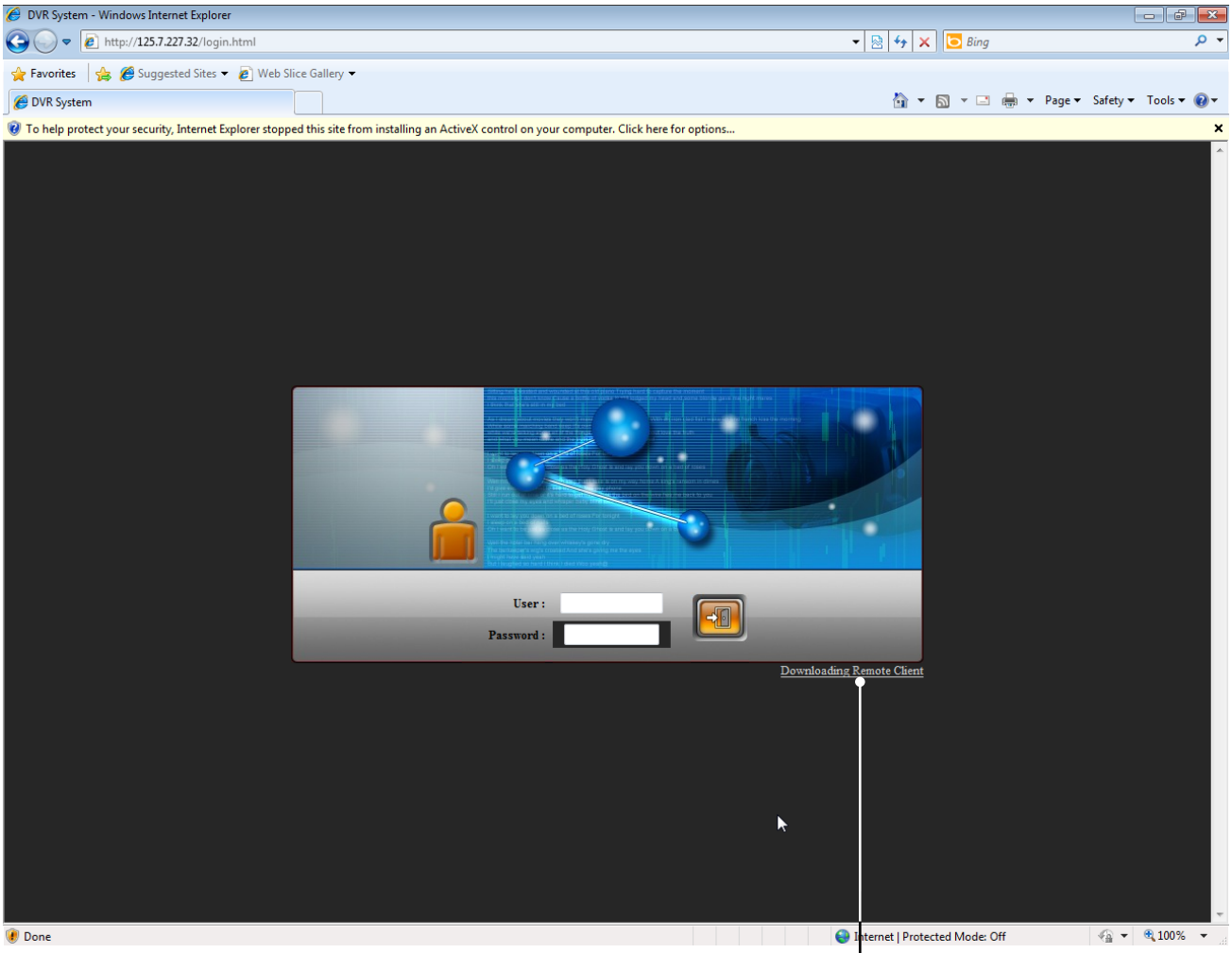


Select "Manual Installation".

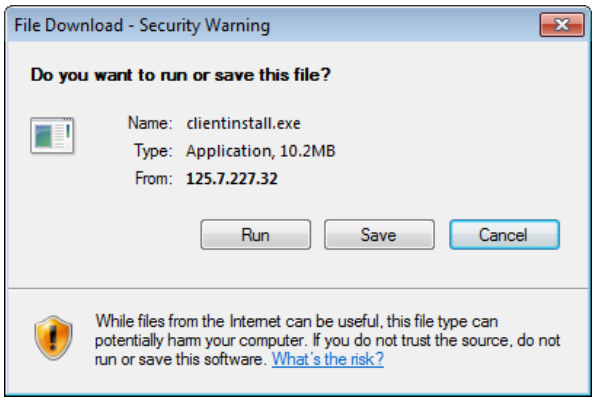


Select "Eyemax DVR Client" only.

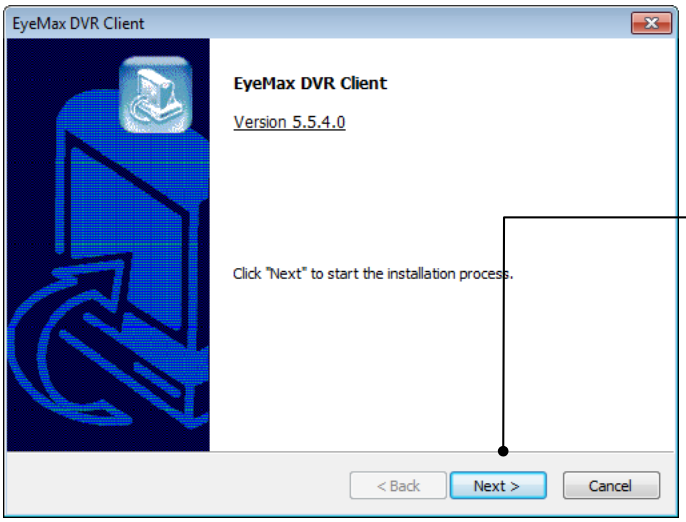
(2) Using Web Browser



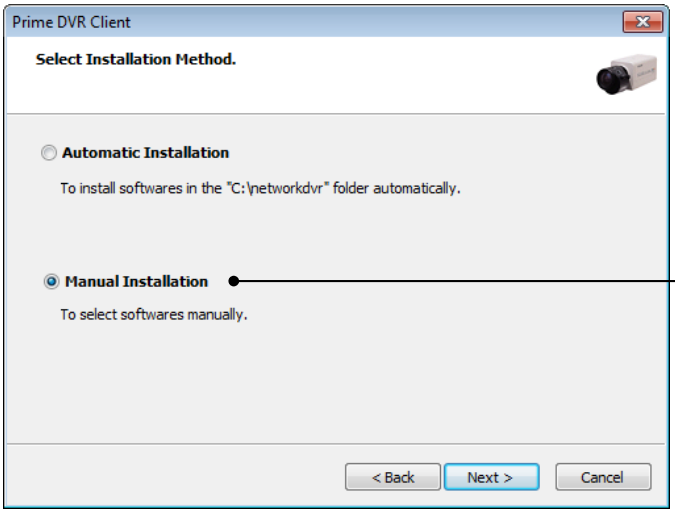
1. Click the “Install Remote Client” button for downloading.


File Download - Security Warning
Do you want to run or save this file?
Name: clientinstall.exe
Type: Application, 10.2MB
From: 125.7.227.32
Run
Save
Cancel
While files from the Internet can be useful, this file type can potentially harm your computer. If you do not trust the source, do not run or save this software. What's the risk?

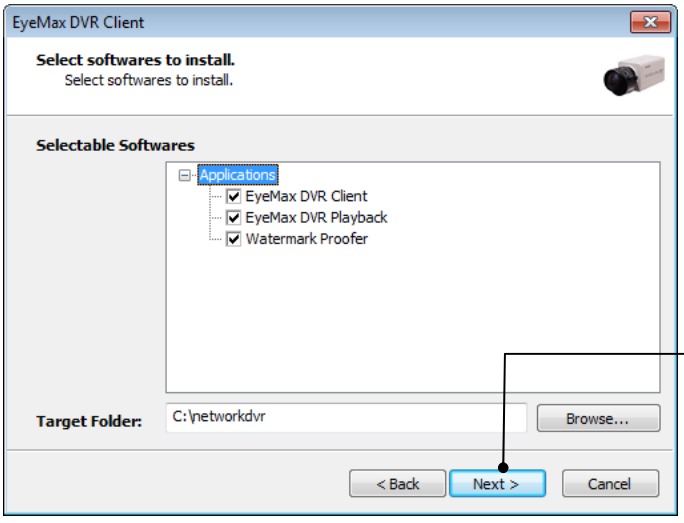
2. Save Client software and run “clientinstall.exe” file to continue.



3. Click “Next” to proceed.

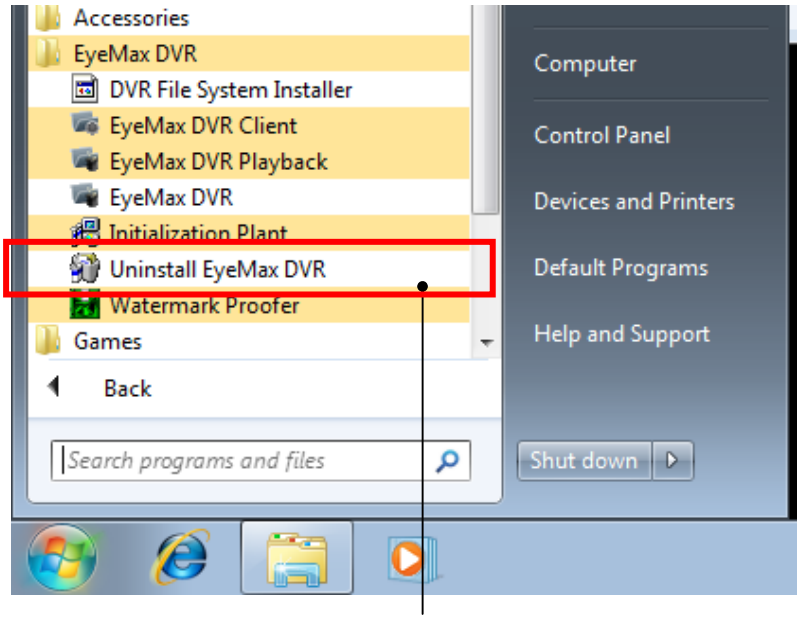


4. Select “Manual Installation”.



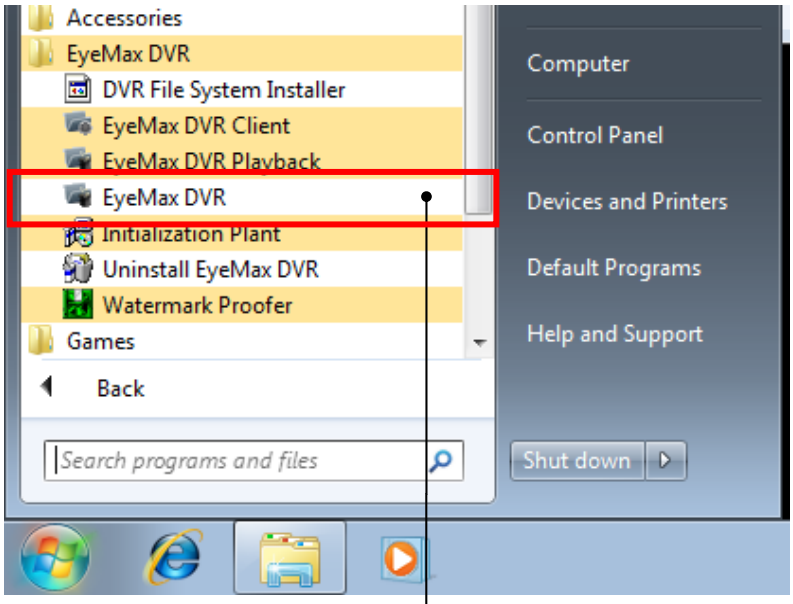
5. Click “Next” to finish installation process.

4. Uninstallation



Execute “Uninstall EyeMax DVR” to uninstall software.

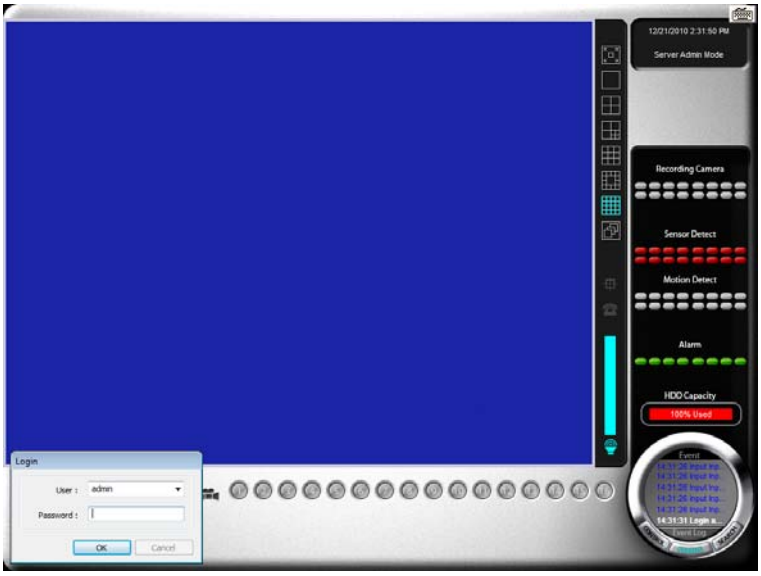
5. Program Execution



Find the icons on the desktop to execute “EyeMax DVR” and “EyeMax DVR Client”.
Or find “EyeMax DVR” under “All Programs”.

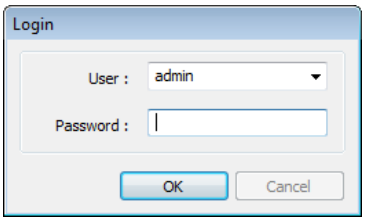
CHAPTER 3
Main System Application

1. Startup Screen



The above screen will appear as EyeMax DVR system starts.

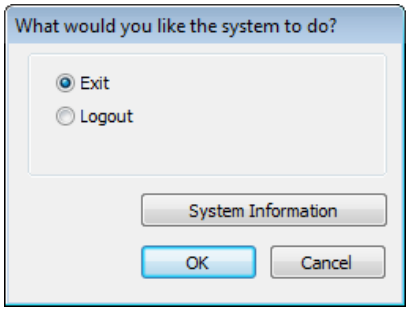
2. Login



The default values for User and Password are “admin” and “no password”. Click “OK” to execute DVR system. To give “admin” a password and to create new users, certain configurations are required (Setup/User). Only “admin” and users with appropriate authorization have access to the Setup menu.

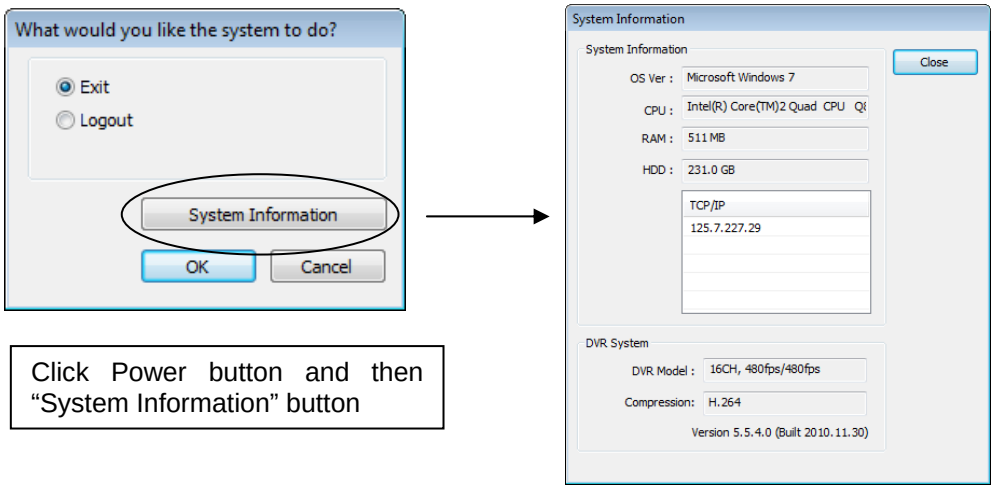
Note: Virtual keypad is available on the right top of GUI if needed

3. Exit / Logout



To end EyeMax DVR system, select “Exit” and type in password. Press OK button to continue.

4. System Information

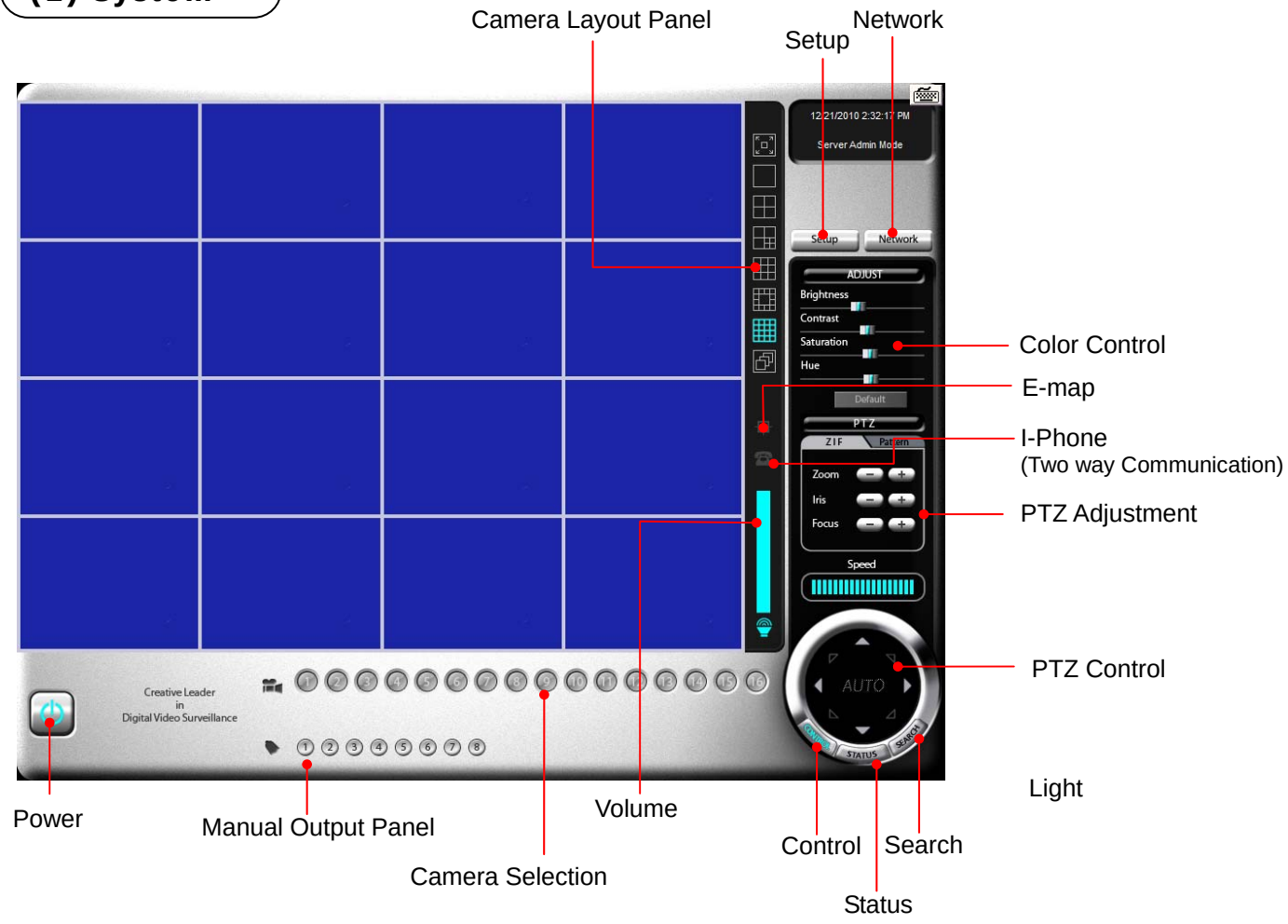


Click Power button and then "System Information" button

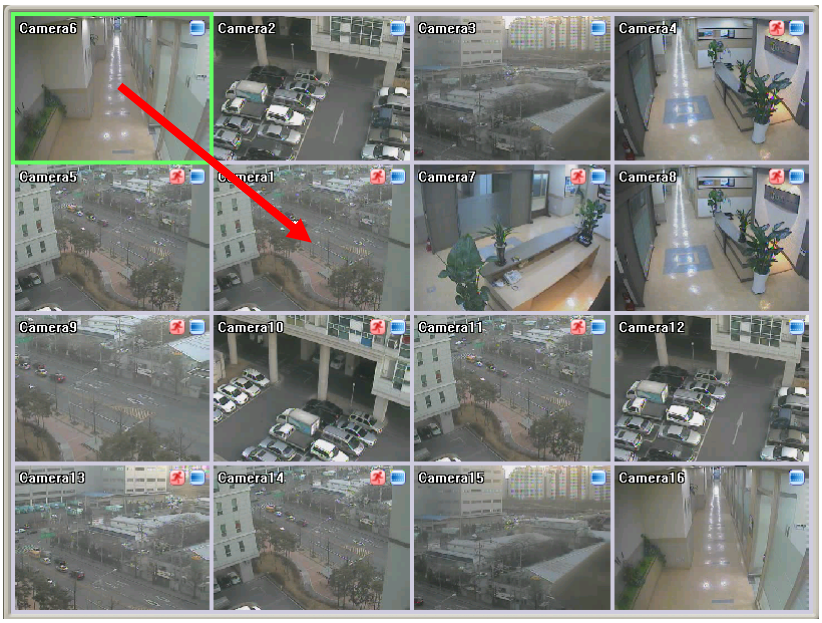
Click on System Information to see DVR system information, such as OS version, CPU, RAM, HDD, IP address, DVR model and DVR software.

5. Control Screen

(1) System



● Channel Relocation



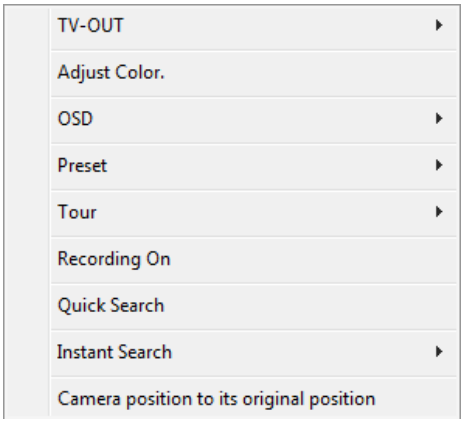
Camera location can be changed by drag & drop by mouse.

How to configure channel by drag & drop:

1. Select channel: click mouse button.
2. Hold on mouse button and drag over to target channel
3. Release mouse button over the target channel.
4. You will see the location of channel has changed on (Refer to above picture)

(2) Right click menu on screen

On control tab, click right mouse button to open shortcut menu.



TV-OUT: Enable selected channel to TV out 2 manually.

Adjust Color: Adjust color setting of selected channel

OSD: Enable/Disable OSD on screen.
(Camera Information/Detection Zone)

Preset / Tour: This is to Add Preset and Tour.

Recording On: Enable force recording on selected channel

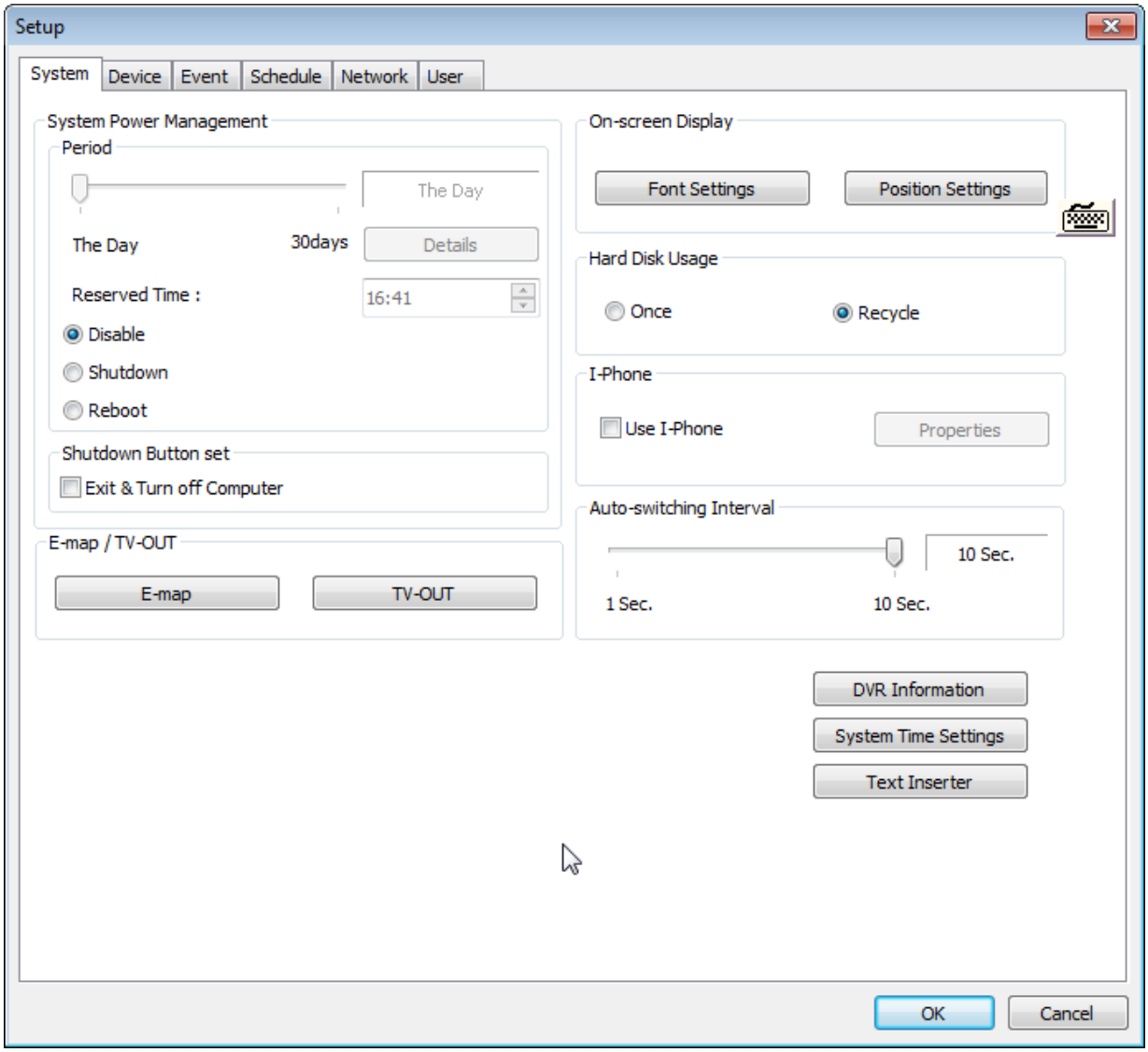
Quick Search: Playback selected channel by pop-up screen.

Instant Search: Playback selected channel on screen
(Before 10/20 seconds)

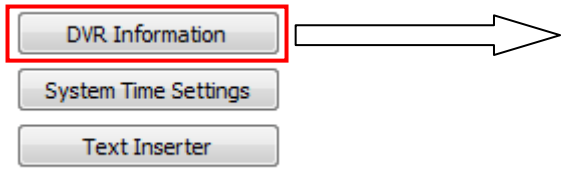
Camera position to its original position:
Revert to default channel location.

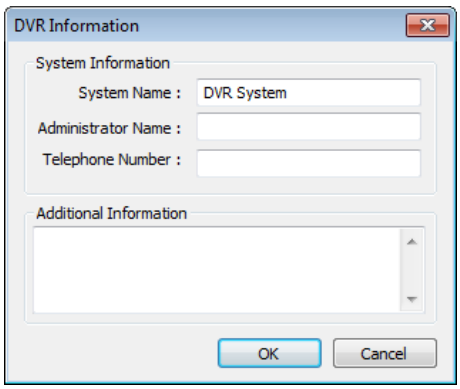
6. Setup

(1) System



● DVR information

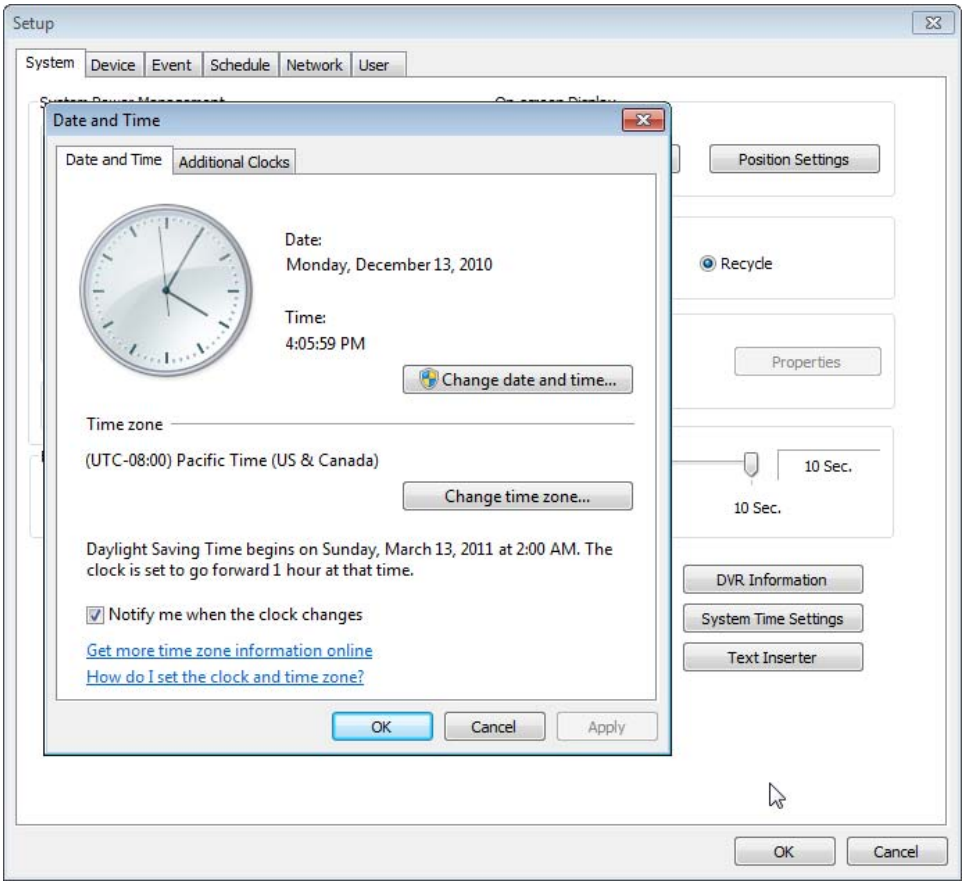




Click DVR Information button to open window

Create a system name and put in administrator info. This information will be displayed on outgoing e-mails.

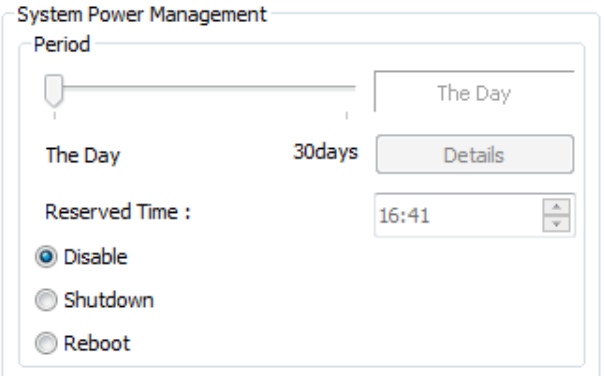
● System Time Setup



By clicking “System Time Settings”, user is able to set Date and Time in DVR software.

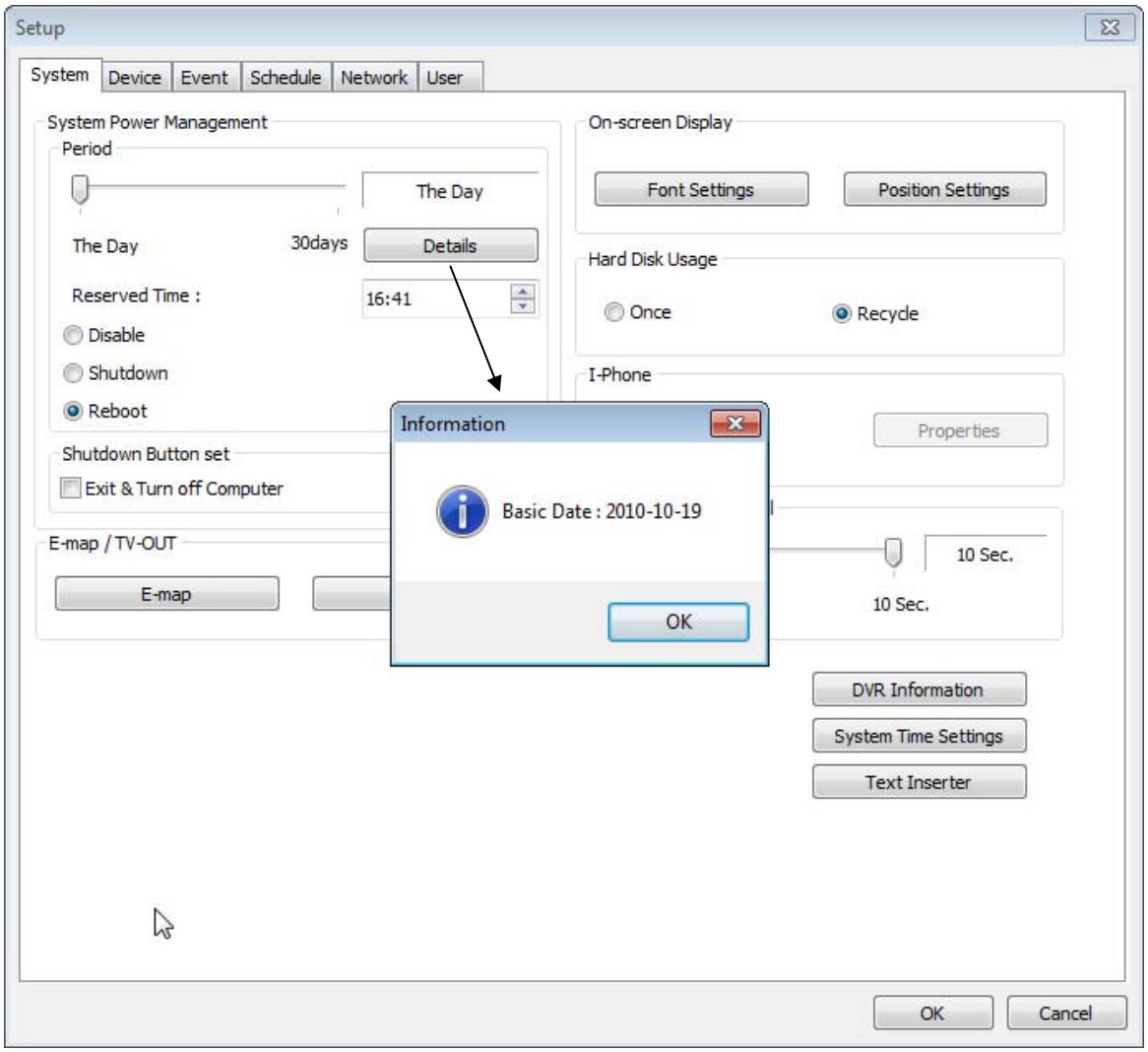
Change date and time: To change current time manually.
Change time zone: To change Current time zone in DVR system.

● System Power Management



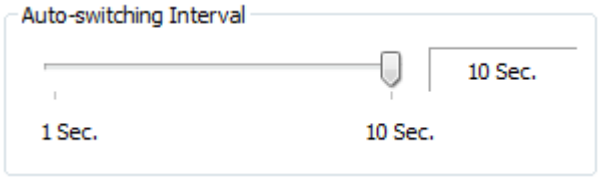
Period: Select a day that DVR system reboots automatically by the period.
Reserved time: Time set to shut down or to reboot computer.
Disable: selected when System Power Management is not to be used.
Shutdown: selected when shutting down computer is required at the time set.
Reboot: selected when rebooting computer is required at the time set.

Exit & Turn off Computer: By checking the box, computer will be turned off automatically as a user exits from DVR system.



Details: First select either “Shutdown” or “Reboot” to enable Period.
For example in above picture, 7 days after the basic date, system will shutdown automatically.
“Details” shows the set date and it will be the starting point.

● Auto-switching Interval

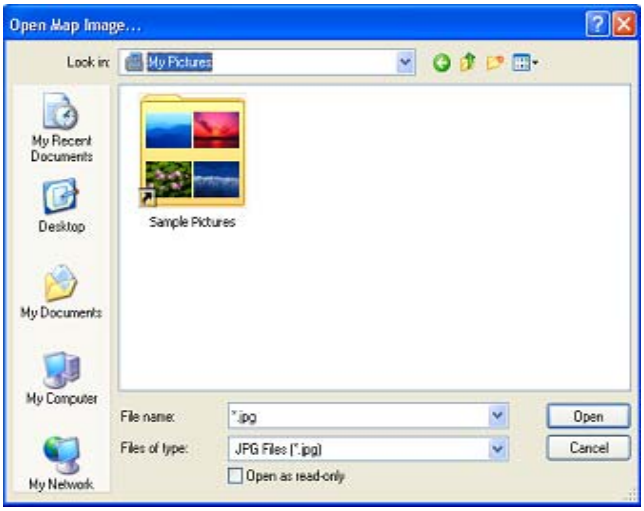


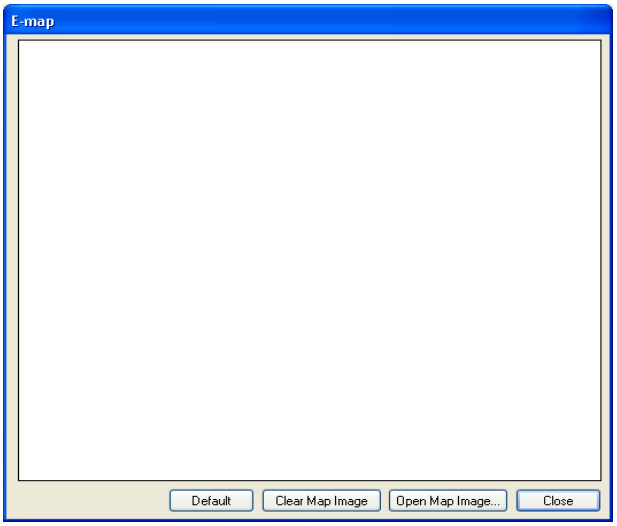
Auto-switching Interval is a function that allows green square around selected camera to move to the next one at the interval set.

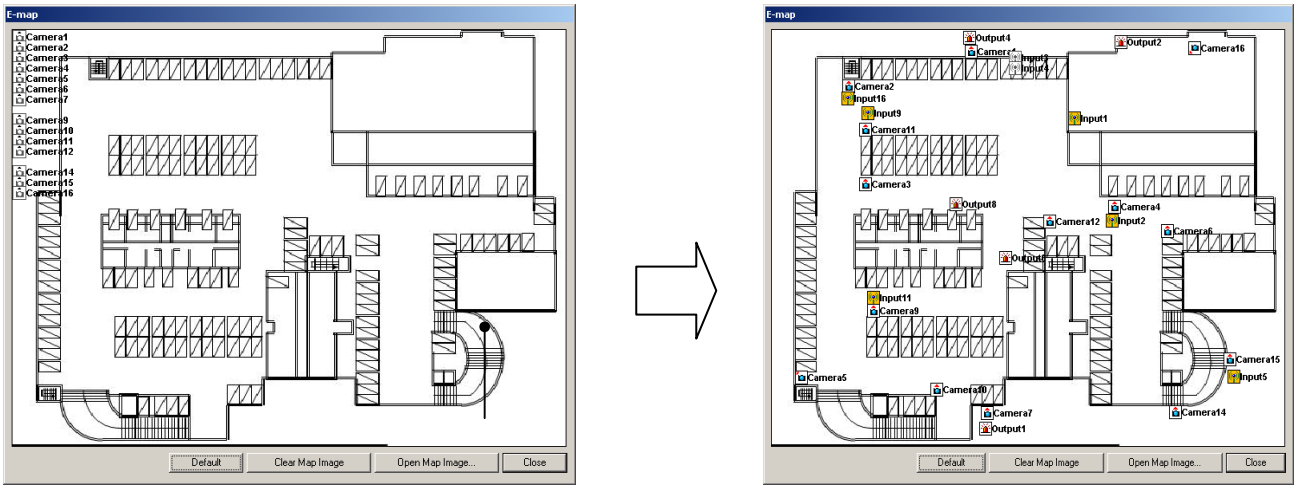
e.g.) Camera 1→10 sec.→Camera 2→10 sec.→Camera 3….

● E-map

Click on the “E-map” button to design E-map.
Click on “Open Map Image” to select an E-map image.





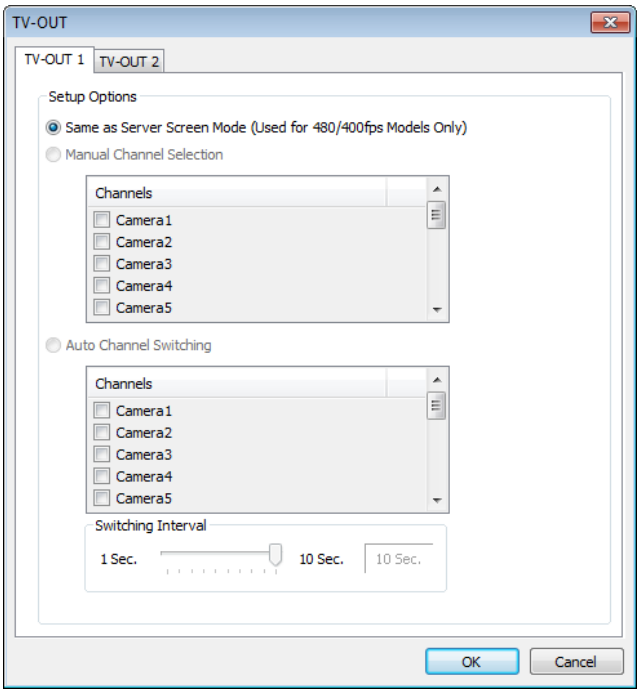


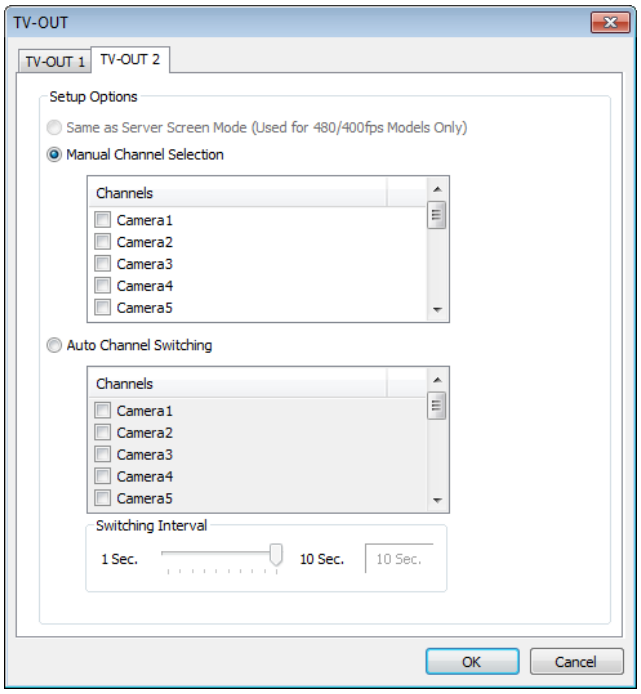
The above is a designed E-map sample.
Drag mouse to position Camera/Input/Output and design E-map.

Click on the E-map button to open E-map.
White Camera: Not on Recording, Yellow Camera: On Recording,
White Input/White Output: Not Activated, Yellow Input/Yellow Output: Activated

● TV-OUT

TV-OUT is a function that sends selected cameras to a call monitor (external analog monitor).
Click on the “TV-OUT” button for setup.





The Number of TV-out Supported

9030	9060	9120	9240	9448	9632	X948
1	1	1	1	1(2)	2	2

The models such as 9240 (240FPS/240FPS), 9632(480FPS/480FPS), 9832(960FPS/480FPS) and X948(480FPS/480FPS) support 2 TV-OUTs. And the rest of the models support 1.

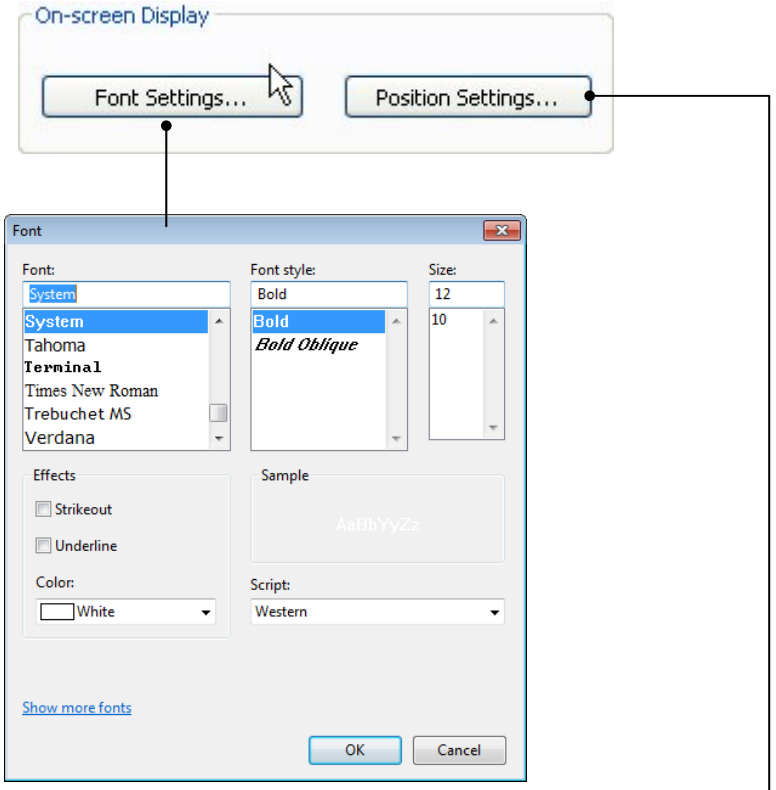
Setup Options:

1. Same as Server Screen Mode
   (9448, 9632 and X948 only) - TV-OUT Monitor displays what's on DVR server.
   Manual Channel Selection - Channels are selected manually. Once "Manual Channel Selection" is selected, channels can also be selected manually on Control screen by placing mouse on camera picture and clicking the right mouse.

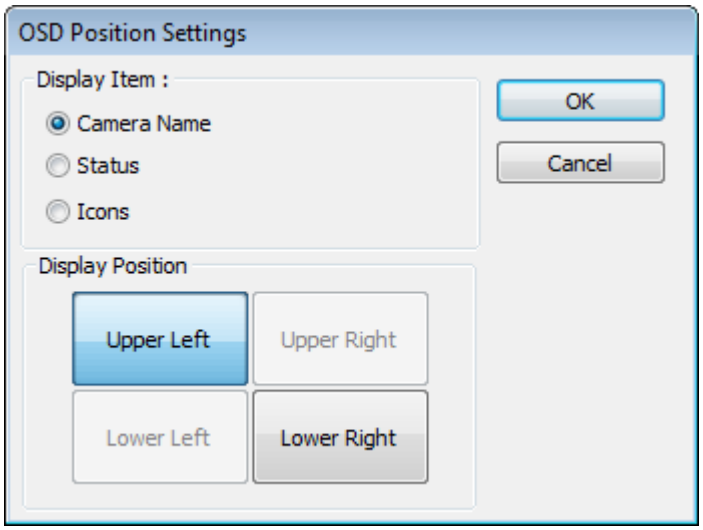
2. Auto Channel Switching - Selected channels rotate to display at the switching interval set.

Switching Interval: The length of time to stay at one camera

● On-screen Display



Font Settings: Font change on screen display.



Postion Setting: Position change on screen display.

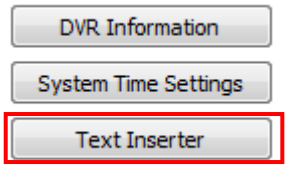
On a control screen, you may click right mouse button to control OSD as below.

Camera Information:
By checking it, camera names and status will be displayed on camera pictures.

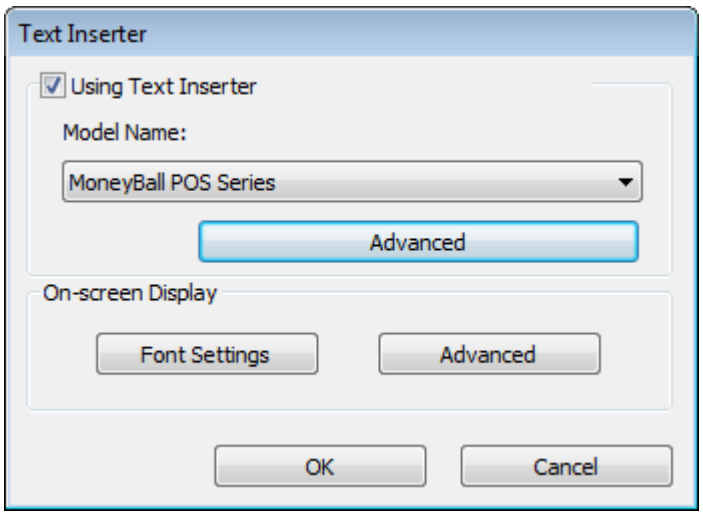
Motion Detection: By checking it, green motion detection blocks will be displayed on camera pictures when recording schedule is set as “M” (Setup/Schedule).

Note: One right mouse click can be a very useful tool. Manual TV-out and OSD setup can be done. Additionally, instant recording can start by one click.

● Text Inserter

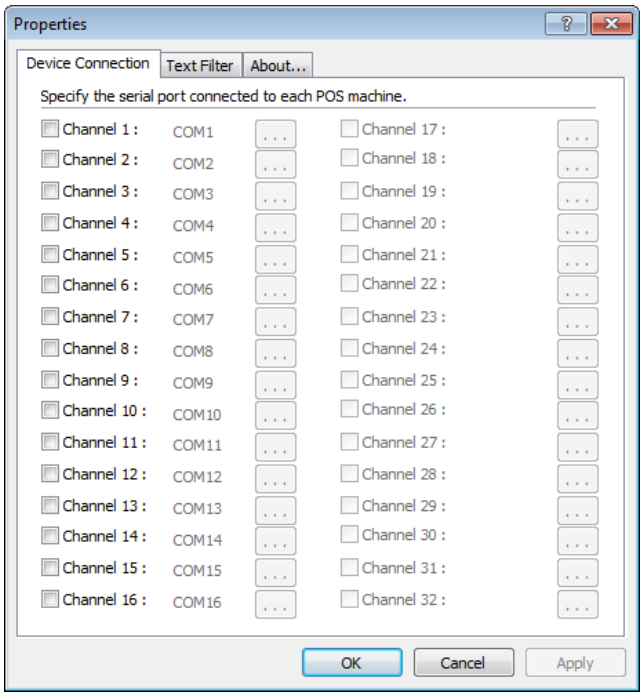


Text Inserter is a function that allows MagicRadar DVR system to integrate with POS machines. Simply select POS driver like selecting PTZ driver to enable POS text inserter program and transactions that occur will be displayed on selected camera pictures. Transaction recording and text search are possible as well.
For more detailed installation and information, refer to Appendix 1.

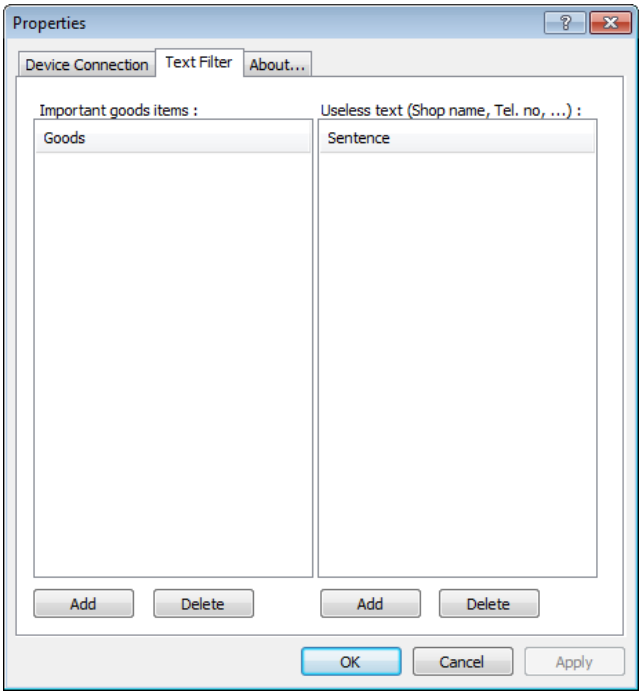


How to Set

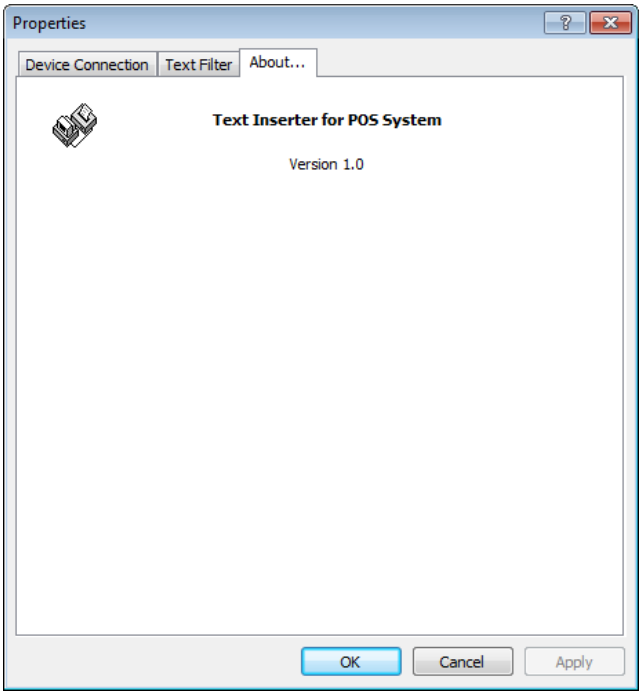
1. Tick the “Using Text Inserter”
2. Choose a connected POS driver.
   (POS driver is addable as PTZ protocol adding.)
3. Click on Advanced to set hardware feature.



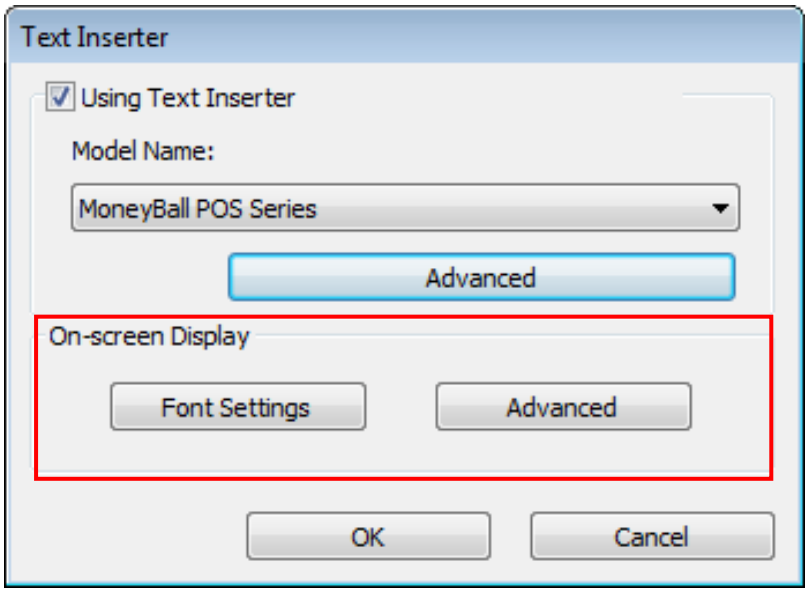
Device Connection: Select camera(s) and a comport connected with POS system(s)



Text Filter: Register important goods and useless text to display distinguishably and search POS data conveniently.
Important goods items: Pre-registered items will be displayed in red characters.
Useless text: It is not going to be displayed during transaction.

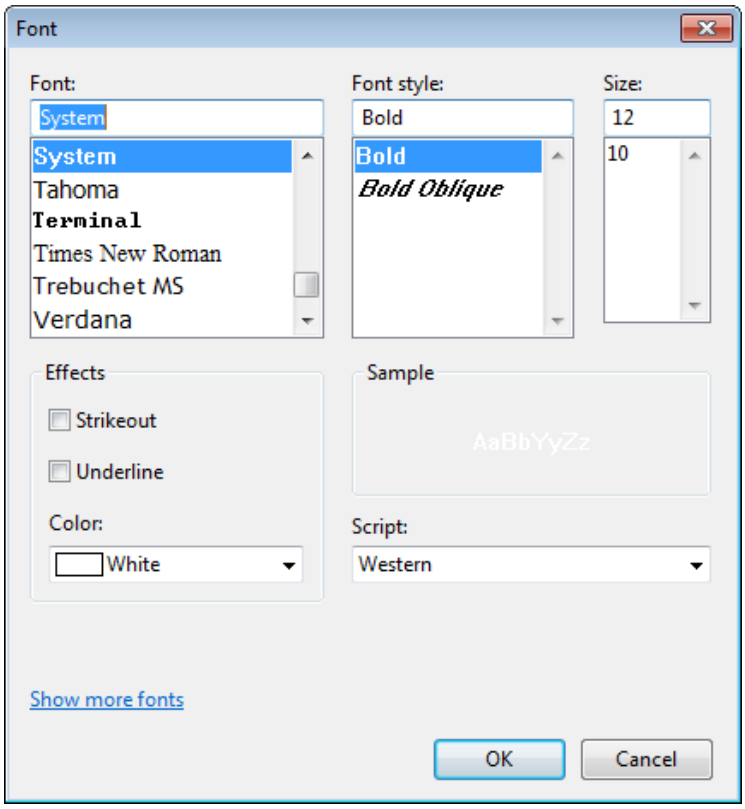


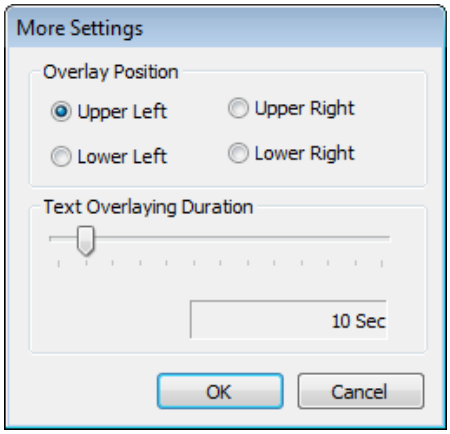
About: Shows POS S/W version.



Font Settings:
Font change on screen display.

Advanced:
Position change on screen display.





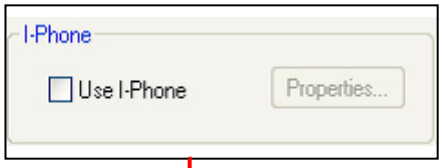
Overlay Position:
Specify position of POS overlay.

Text Overlaying Duration:
Specify duration of POS data shows.

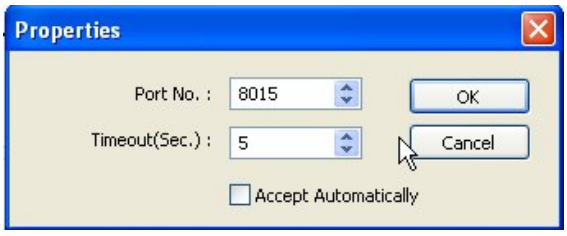
● Hard Disk Usage

Hard Disk Usage is to select data storage method. If “Once” is selected, data will be stored up to the point where HDD reaches its maximum capacity. If “Recycle” is selected, data will be overwritten from the point HDD reaches its maximum capacity based on “First In First Out”.

● I-Phone (Two-Way Audio Communication)



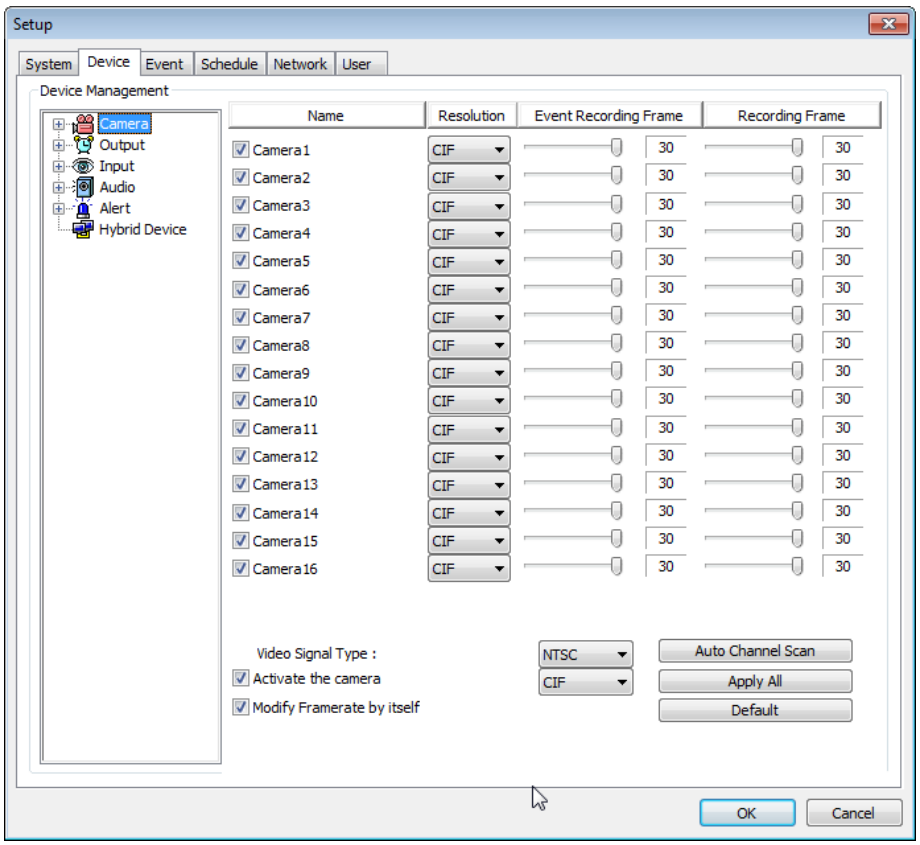
I-Phone is “Two-Way Audio Communication”.
Check the box, go to Control Screen, and click on the I-Phone button for audio communication.
For more detailed I-Phone setup, refer to Appendix “Two Way Audio Communication.



Port No.:
A port number for I-Phone use has to be set up. Normally the default value is good to use.
Timeout: It indicates the maximum length of connection trial. If there is no response within the value set, call will be cancelled.

Accept Automatically:
To accept counter part’s IP-phone connection without checking a confirmation message.

(2) Device



Device sub-screen is divided into 5 different setup categories; Camera, Output, Input, Audio Alert and Hybrid Device. (Hybrid Device category will be added by install hybrid driver. To integrate Hybrid device on 5.5.4.0 refer to page 52. “Hybrid Device”)
All devices in each category can be set up on one same page.

● Camera

Cameras will be enabled by checking the boxes.

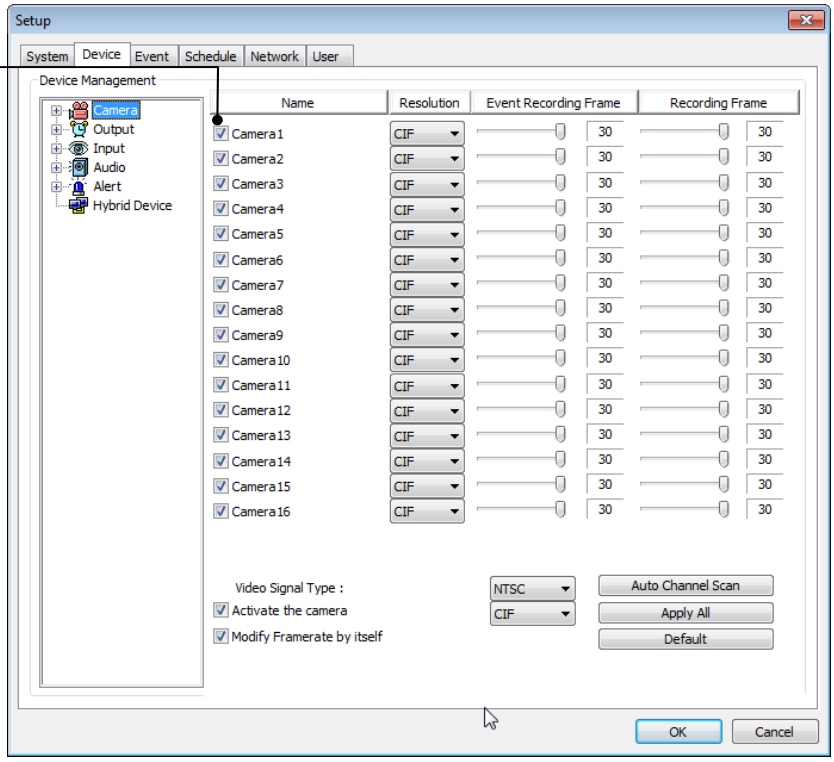
Different resolutions and recording frame rates can be set up for different cameras.

Video Signal Type:
Select either NTSC or PAL.

Auto Channel Scan:
It automatically identifies all the active video channels. Make sure to always click and scan after S/W version change.

Default:
It sets “Event Recording Frame” and “Recording Frame” as default values.

Modify Frame rate by itself: Frame will be adjusted automatically by select resolution



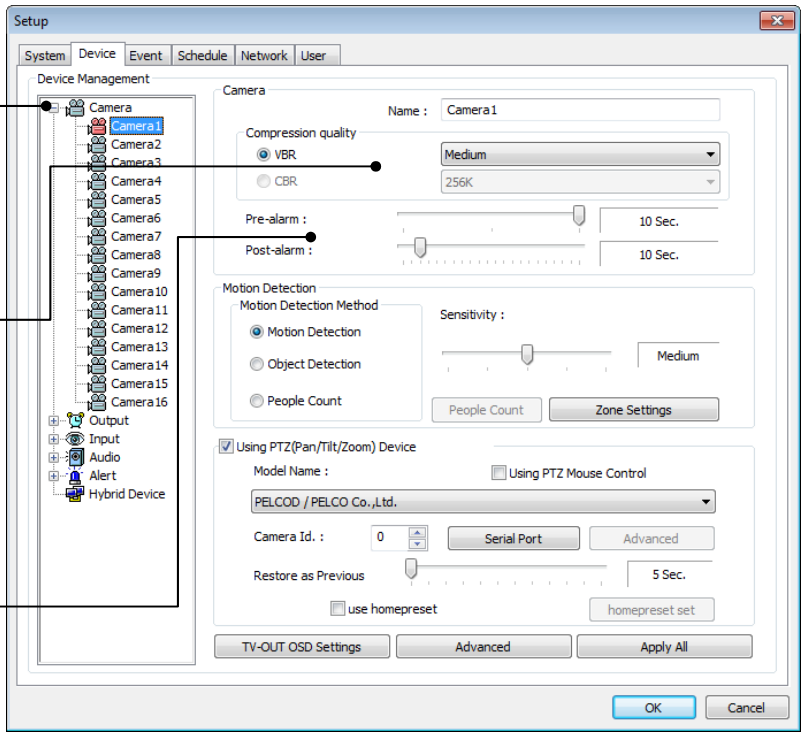
[Camera]

Double-click on “Camera”for more individual Camera setup.

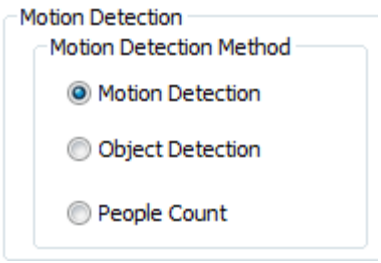
Select recording picture quality. CBR can be set with X948 (H.264 hardware compression) only.

Pre-alarm (max. 10 sec.):
Length of time to be recorded before event

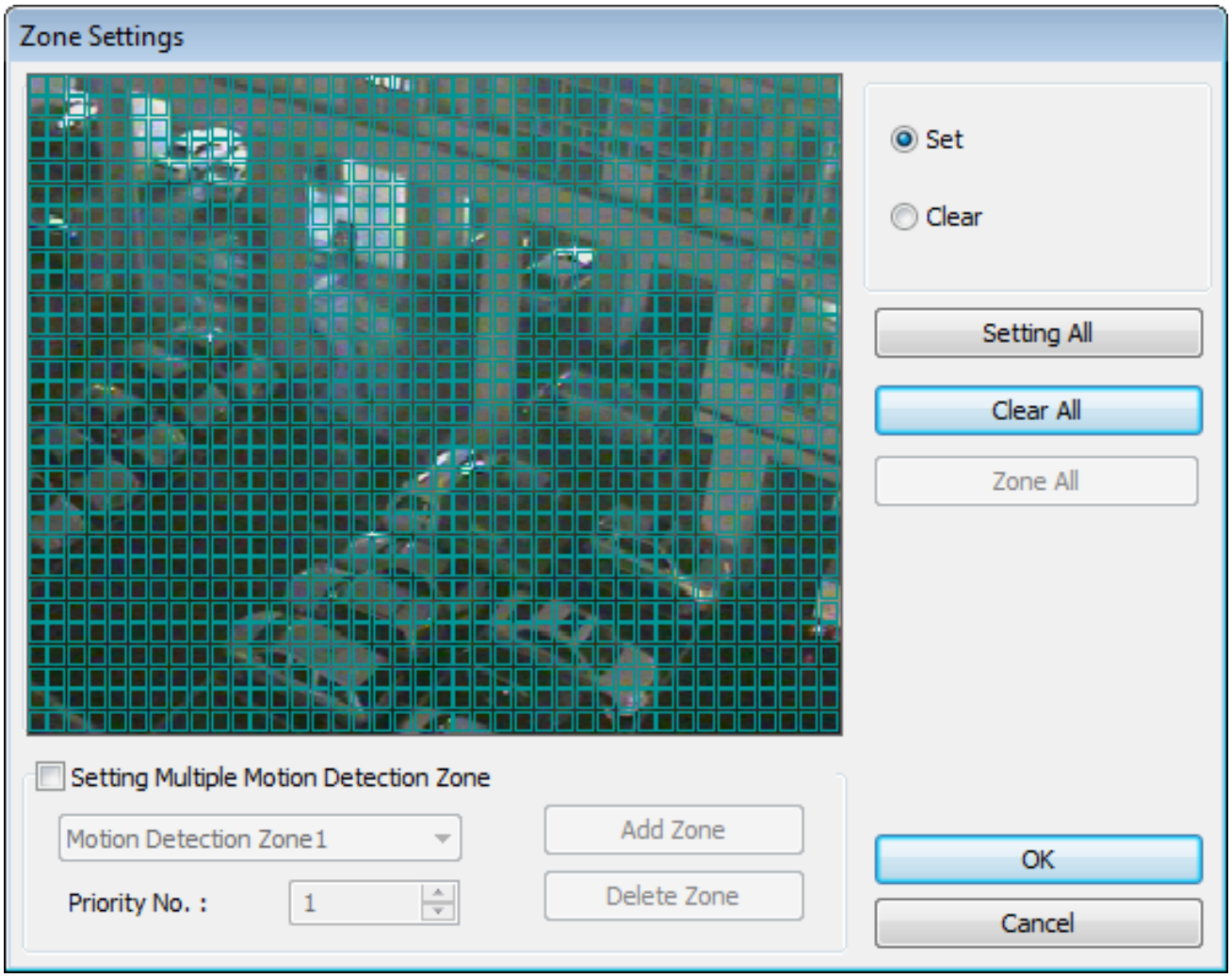
Post-alarm (max. 10 min.):
Length of time to be recorded after event



[Motion Detection]

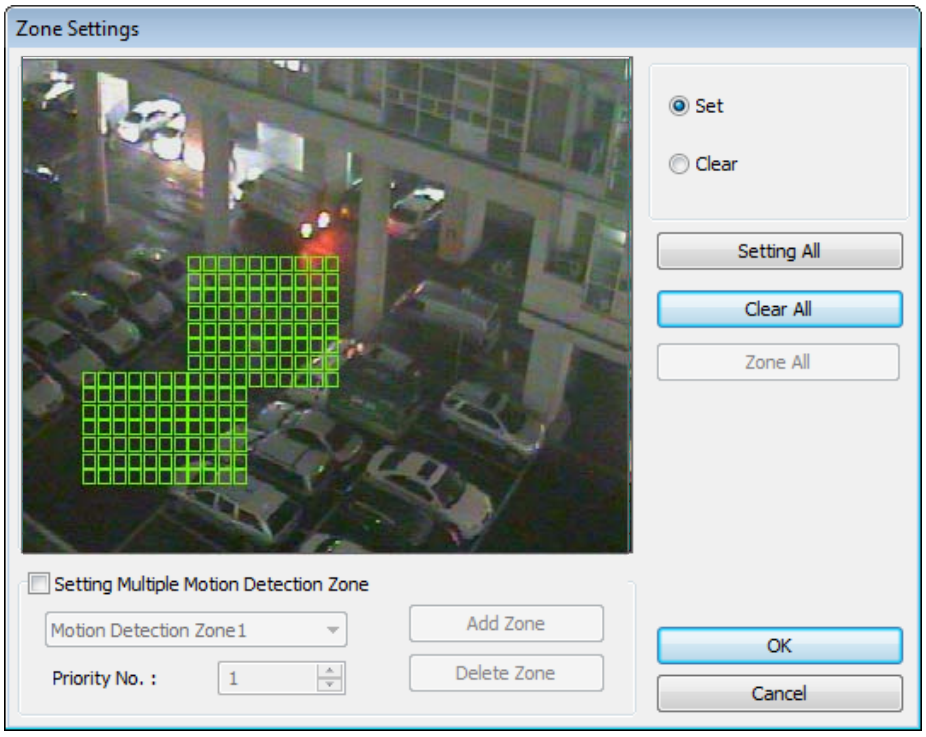


Select a function between Motion detection, Object detection and People Count.
Motion detection is a function that DVR software detects every movement or motion by comparing a frame with its previous frame.



Zone Setting:

1. Drag mouse on desired place to set motion detection zones.
2. To clear the zones set, click on “Clear all” or drag mouse after click on “clear”.



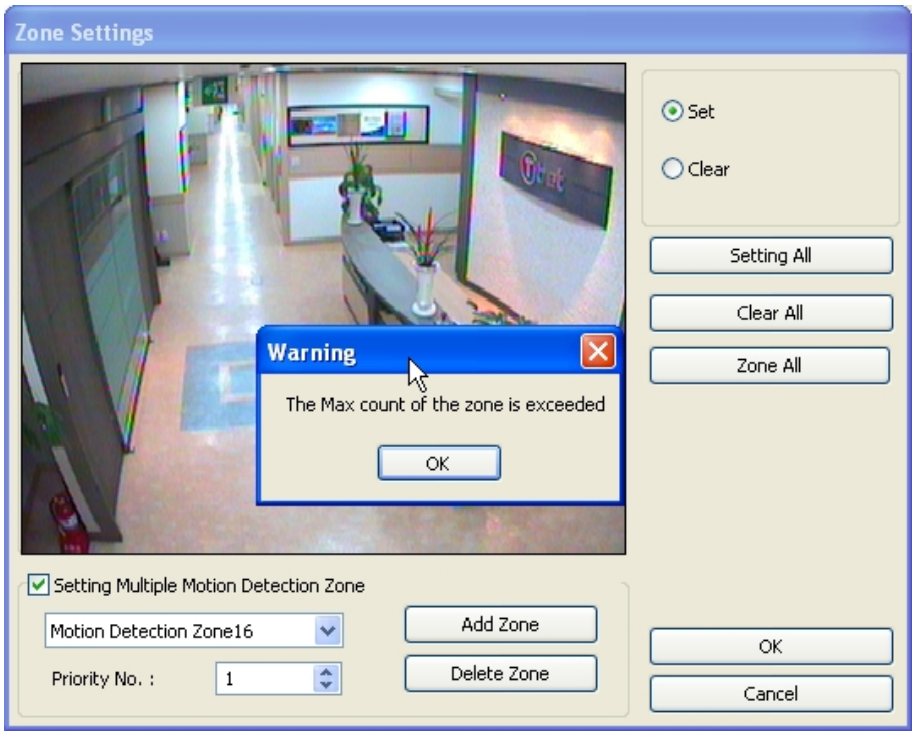
Setting Multiple Motion Detection Zone:

To set more than one motion detection zone.

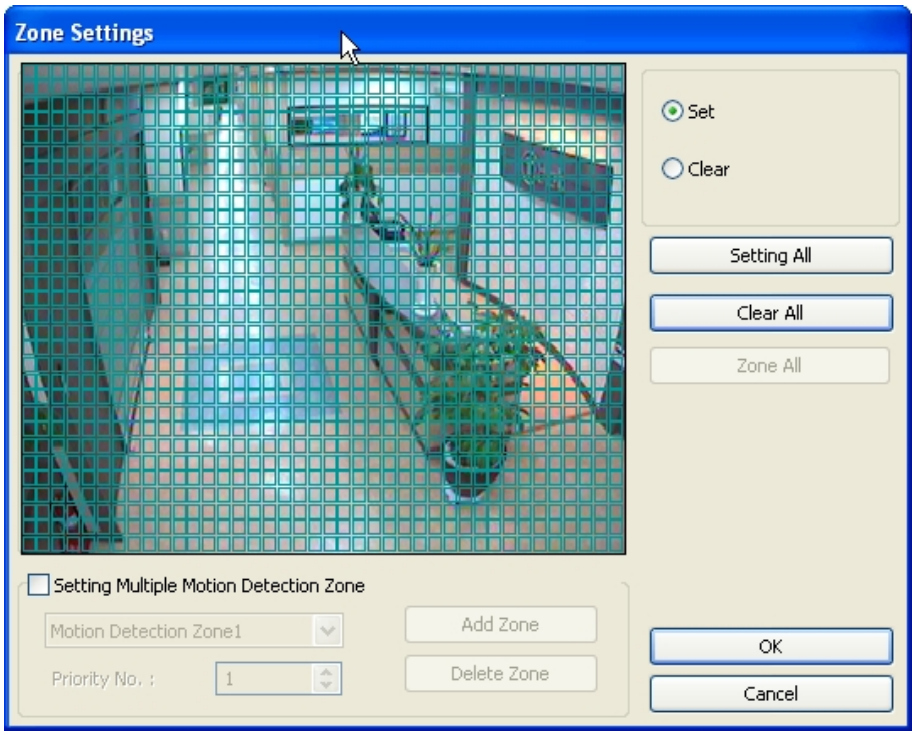
Possible up to 16 motion detection zones with all different colors.

How to set:

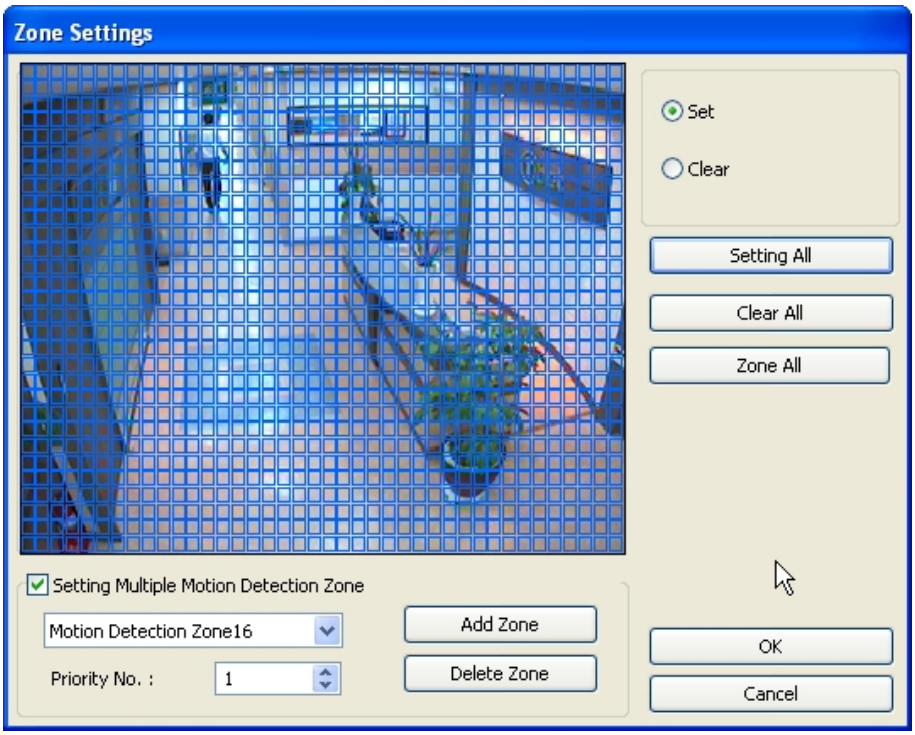
Click on “Add Zone” and select another zone desired to be detected.



Note: If the number of zones exceeds 16, above error message will be appeared.

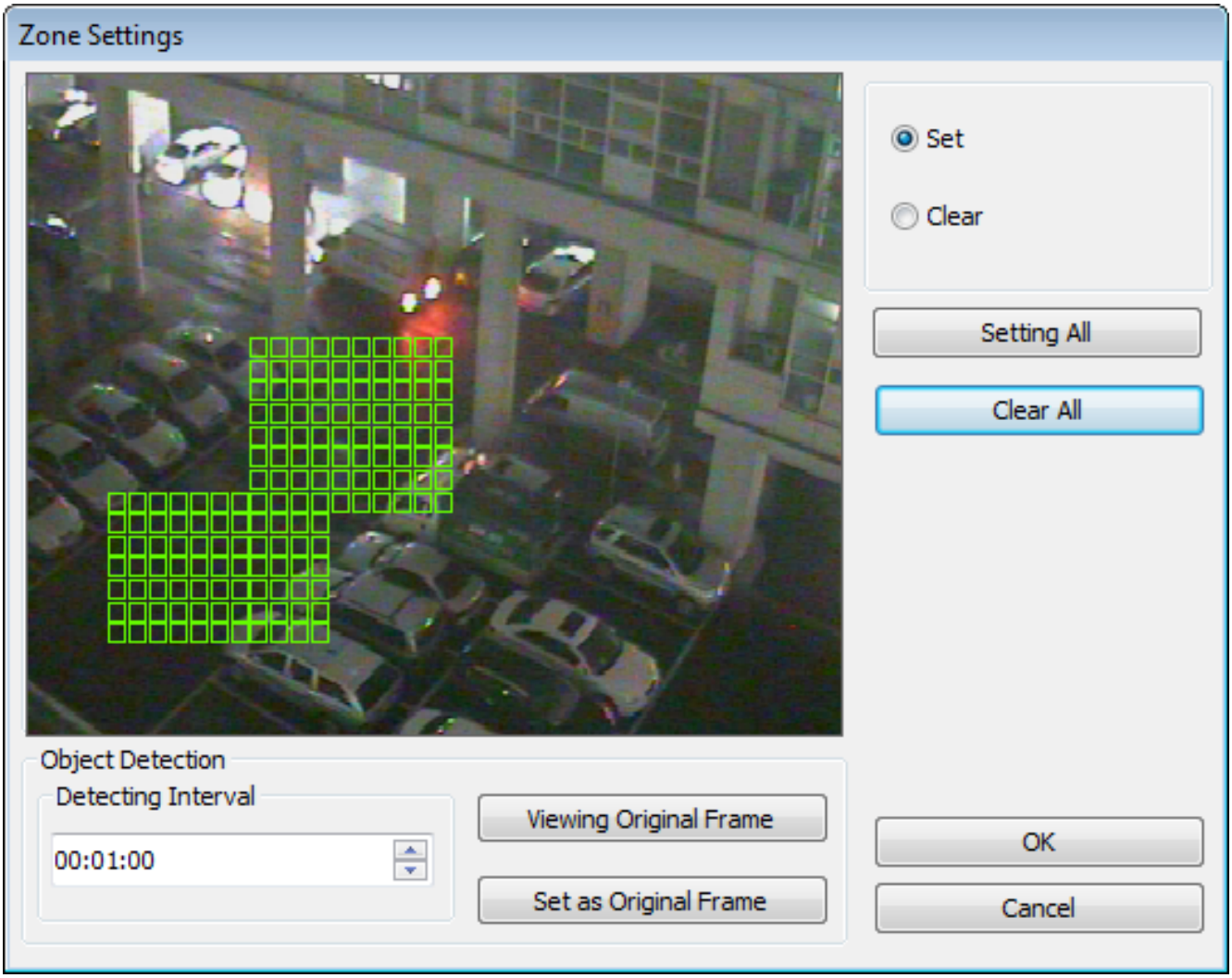


Zone All: Displays all areas together that have been set for the zones.



Setting All: Selects whole area
Delete Zone: Deletes zones one by one.

[Object Detection]



It is a function that marks all the changes occurred from the original scene.
DVR will detect new & missing objects after a certain period of time (detecting interval).

Detecting Interval: An interval that DVR tries repeatedly to detect any object change in the zone set. For example, if the object is appeared and remained only 5 seconds, it will not be detected in case 1 min. detecting interval is set as above.

Viewing Original Frame: Checking an original image set.
Set as Original Frame: Save an original image to be surveilled to check missing or appeared object.

Set: To mark a zone.

Setting All: Select all zone in a selected channel

Clear All: To clear set zone.

Click the right mouse and select “Clear Object Detection Blocks” to remove all the blocks.

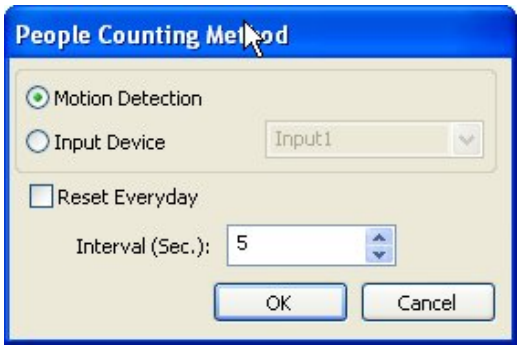
Object Detection icon

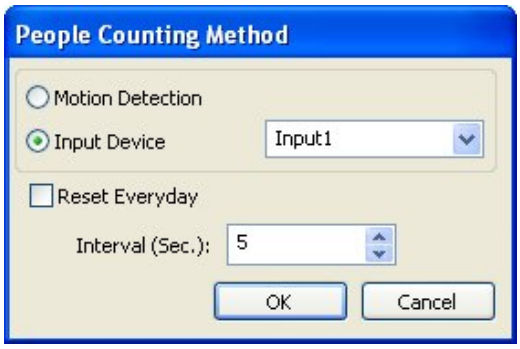
How to Set up:

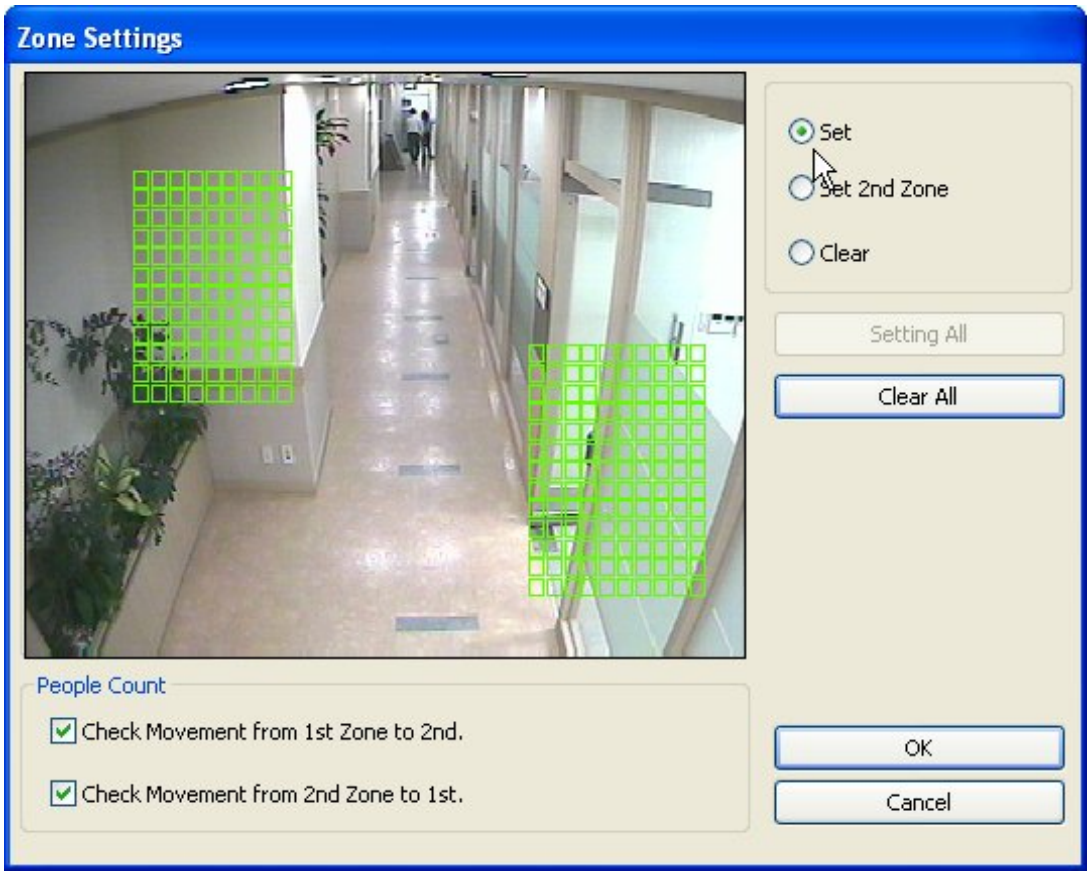
1. Tick the “Object Detection” box and click on “Zone Settings”.
2. Drag the mouse to select object detection zone (same as “Motion Detection”).
3. Click on the “Set Frame” button to select original (default) image.
4. Go to “Detection Interval” and determine when to mark new object after its pause.
5. Go to “Setup/Schedule” and select “M”
6. Go to the “Control Screen” and find the red-squared “Object Detection” symbol.
7. One click on the “View Original Frame” button will display original image set.
8. Click it again to reactivate the “Set Frame” button.

[People Count]

It is a function that counts people coming in and out of a certain place.





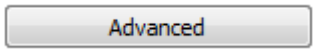


How to Set up:

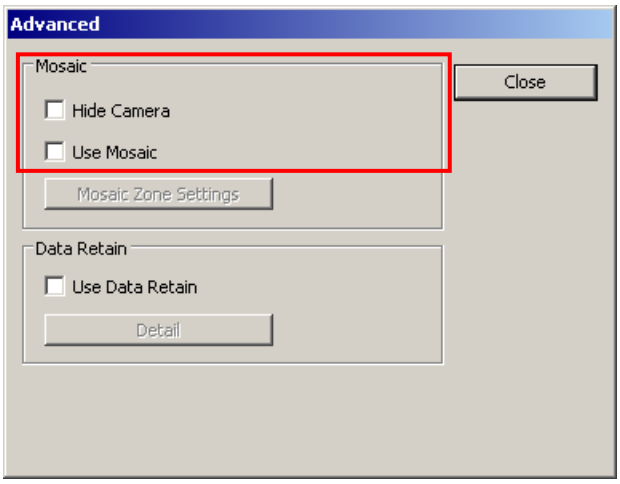
1. Set Count Interval.
2. Set zone by dragging mouse.
3. If a directional counting is needed, select one.

Motion Detection: Counting by Motion Detection.
Input Device: Counting by Input Device such as sensor.
Reset Everyday: Tick box to reset everyday automatically.
Interval (Sec.): Counting interval from the time object is detected.
Check Movement from 1st Zone to 2nd: Counting based on the direction a place to another.
Check Movement from 2nd Zone to 1st: Counting based on the direction a place to another.
Set: Set the first zone.
Set 2nd Zone: Set the second zone to be detected.
Clear: Clear the zone selected.
Setting All: Selects all areas on the screen.
Clear All: Clear all zones selected.

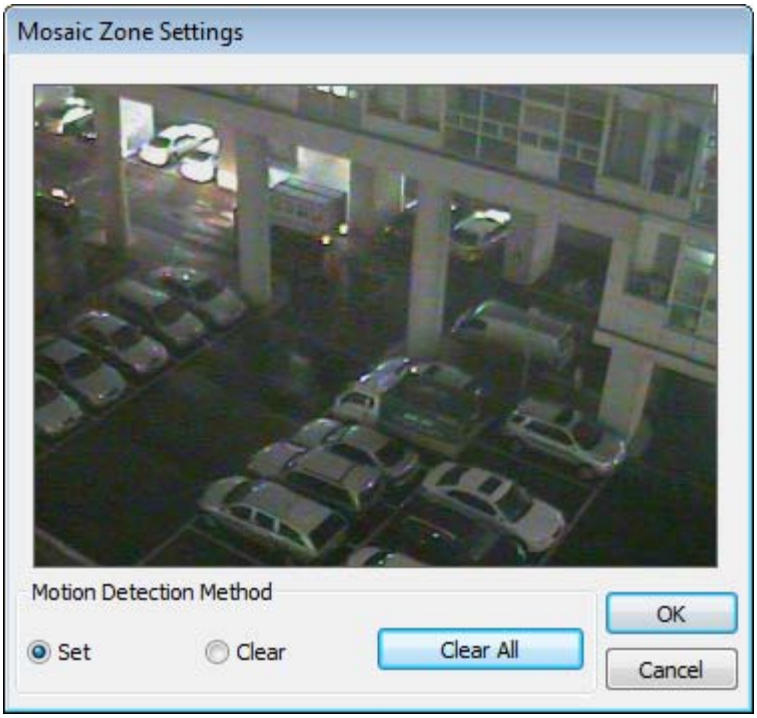
[Mosaic]



It is a function that veils restricted areas to keep regular users uninformed.
Hide



Hide Camera: If “Hide Camera” is selected, every user except admin cannot see relevant channel.



How to Set up Mosaic Zone:

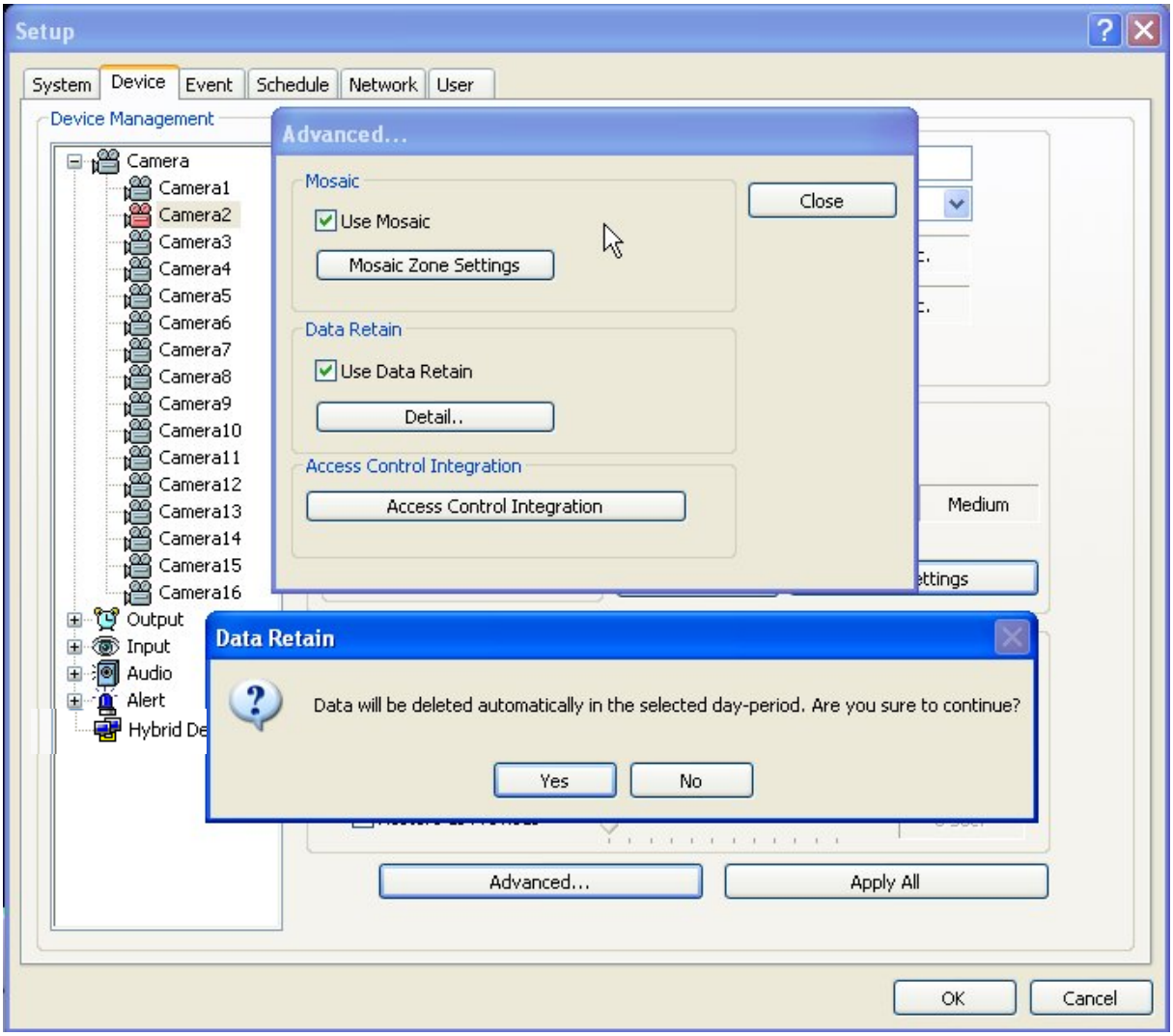
1. Tick the “Use Mosaic” box then “Mosaic Zone Settings button” will be enabled.
2. Click on “Mosaic Zone Settings”.
3. Set “Mosaic Zone”.
4. Go to the “Control Screen” and find veiled areas.

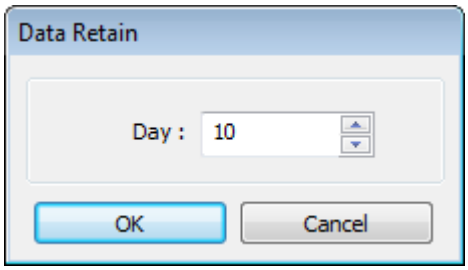
Note:

1. While using Mosaic, “Save” or “Print” cannot be performed.
2. To see unveiled area, logging in as “Admin” or “Admin Mode” is required.

[Data Retain]

It is a function that retains data only for the period set.
For example, if 10 days is set, DVR will delete all previous data before 10 days regardless of the capacity remaining in HDD.





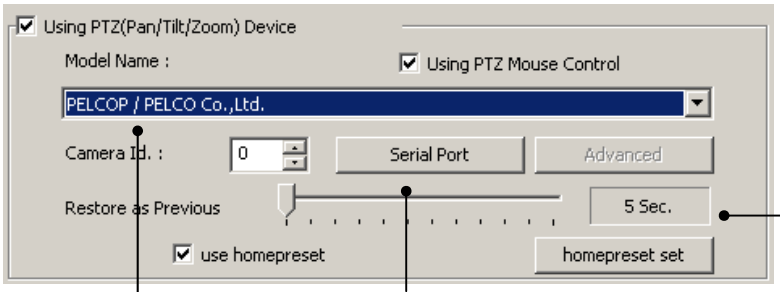
How to Set up:

- Click on “Advanced”
- Tick the “Use Data Retain”.
- Click on “Detail”. to select a day period to retain

Note: Warning message to inform as above will be appeared. To continue, click on “Yes”

[PTZ Camera Setup]

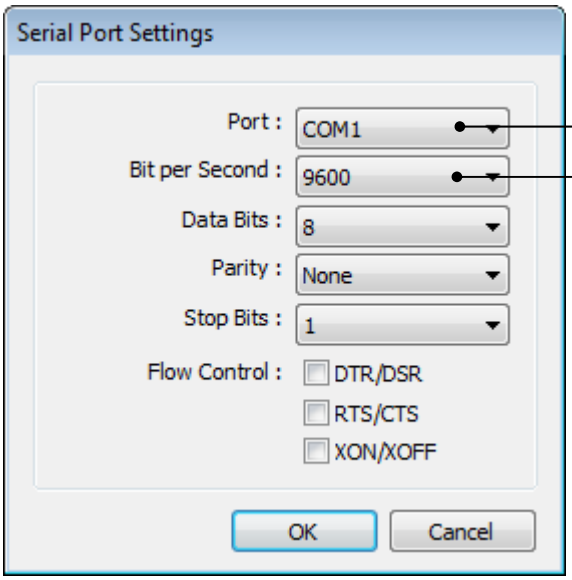
When using a PTZ camera, check the box and select a model name.
MagicRadar DVR system supports nearly 40 different protocols.



Use homepreset:
Tick the box and set homepreset set (Select preset as home preset).

Camera ID:
Leave it as it is if only one PTZ camera is used. Otherwise, give each camera a different number.

Restore as Previous:
Set time period to move camera back to initial position after a certain period of time.

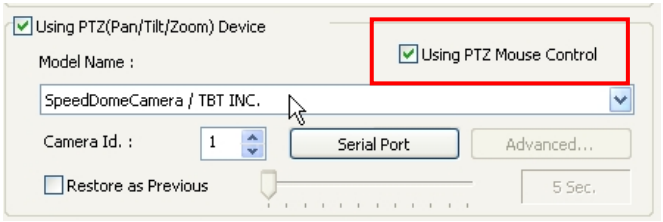


Select the port used for PTZ camera.

Bit per Second:
It is 9600 for most of PTZ cameras.
But a few can have different values.
Refer to camera manual.

Apply All:
The same settings will be applied to the rest of the cameras by clicking on “Apply All”.

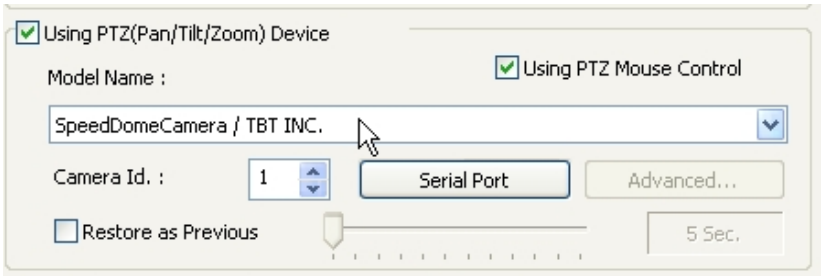
[PTZ Control by Drag and Drop]



How to Set Up:

1. Simply ticks “Using PTZ Mouse Control” as above and select a proper PTZ model name.
2. On a PTZ screen, drag mouse to the desired position to see.

[Virtual Keypad for Speed Dome Camera]

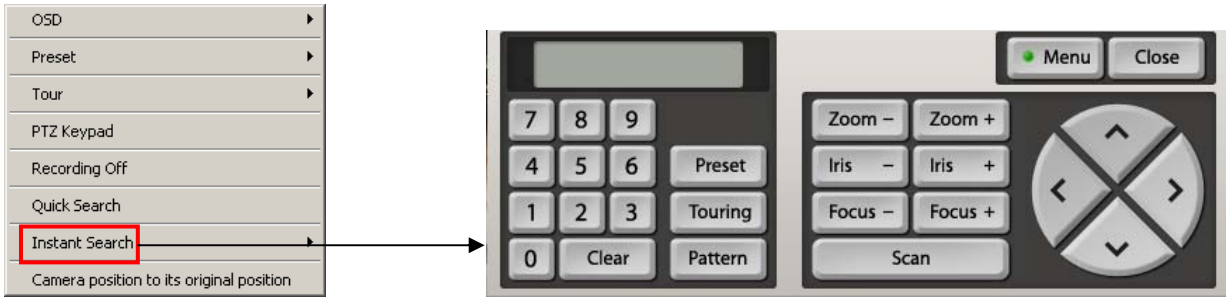


How to Set Up:

1. Select “SpeedDome Camera/TBT INC.” protocol to run Virtual Keypad.

2. Set proper Camera ID, Port, Bit per Second, and etc.

3. Click right mouse button on PTZ Screen and select “ PTZ Keypad”.

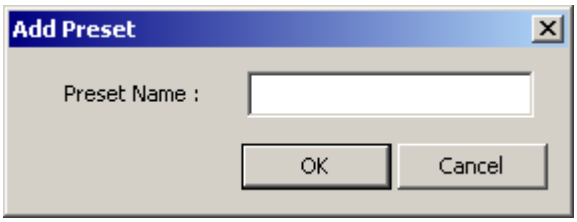


Click on “Menu” to go into Camera OSD.
Once preset and touring have been set through this virtual keypad, they must be controlled by the keypad.(Menu buttons on GUI will not work.)
For example, when preset 1 is set, press 1 on the keypad and “Preset”. Then it moves to the Preset No. 1 position.

Note: Now only limited Speed Dome models are available to run this keypad.

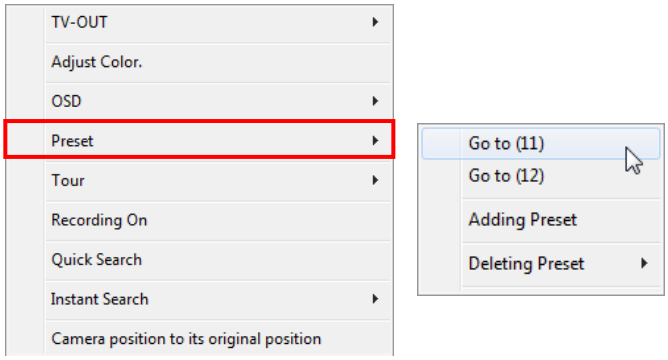
[Preset]

"Preset" is a function that enables a camera to move from one position to another automatically.



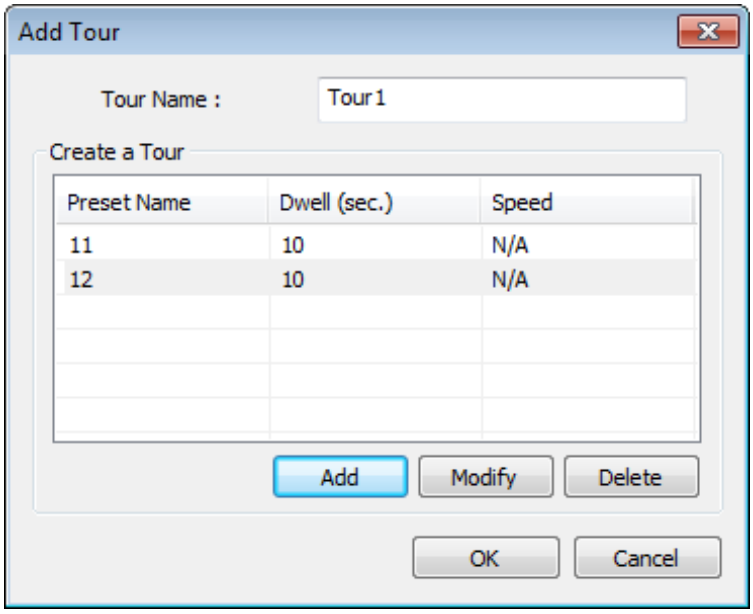
Steps to Set up Presets:

1. Move camera to a desired position using the PTZ Control on Control screen.
2. Click the right mouse.
3. Name the preset.
4. Repeat the above for setting up as many as 256 presets.
5. Click the right mouse to run preset and click the "Auto" button to stop it.



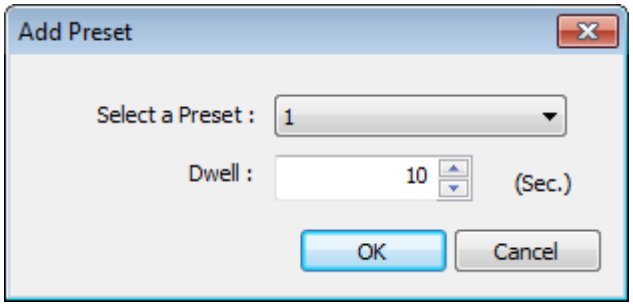
[Touring]

"Touring" is a function that enables a group of selected presets to work repeatedly.



Steps to Set up a Tour:

1. Click the right mouse.
2. Name the tour.
3. Click on "Add".
4. Select a preset.
5. Click "OK".
6. Repeat the above to have more than 1 preset in the tour.
7. Click the right mouse to run the tour.

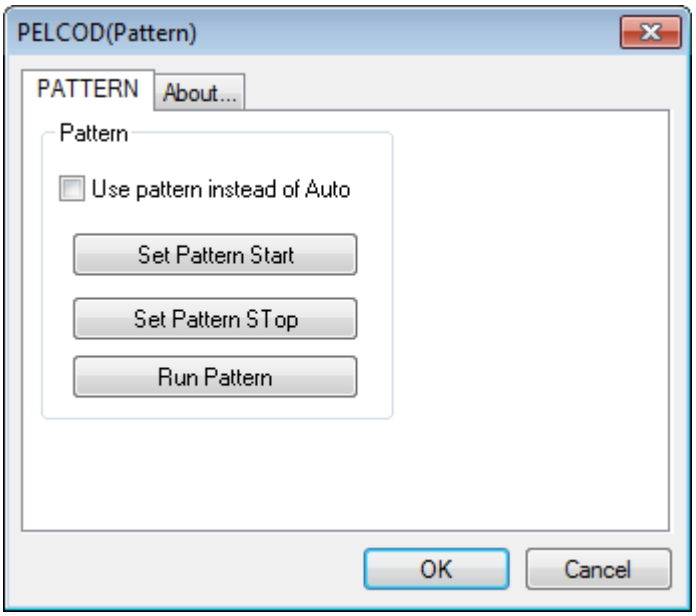


Dwell:

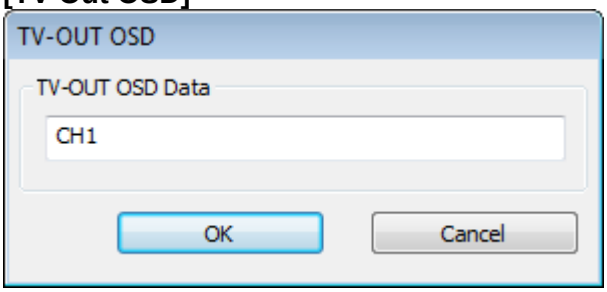
The length of time that camera will pause before moving to the next preset.

[Advanced PTZ Settings]

Open right mouse click menu and click “Advanced PTZ Settings”
Make sure that the PTZ camera to set up supports advanced PTZ control functions first.

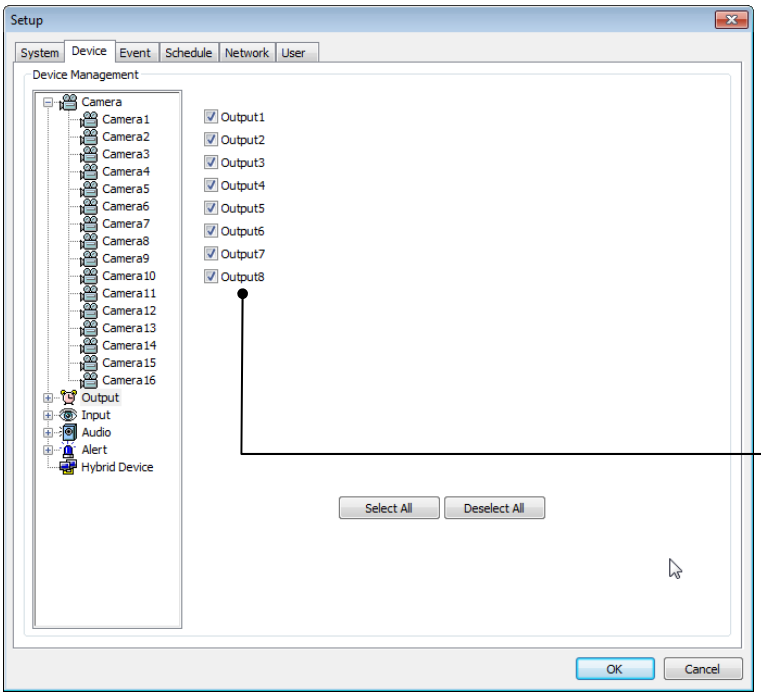


[TV Out OSD]

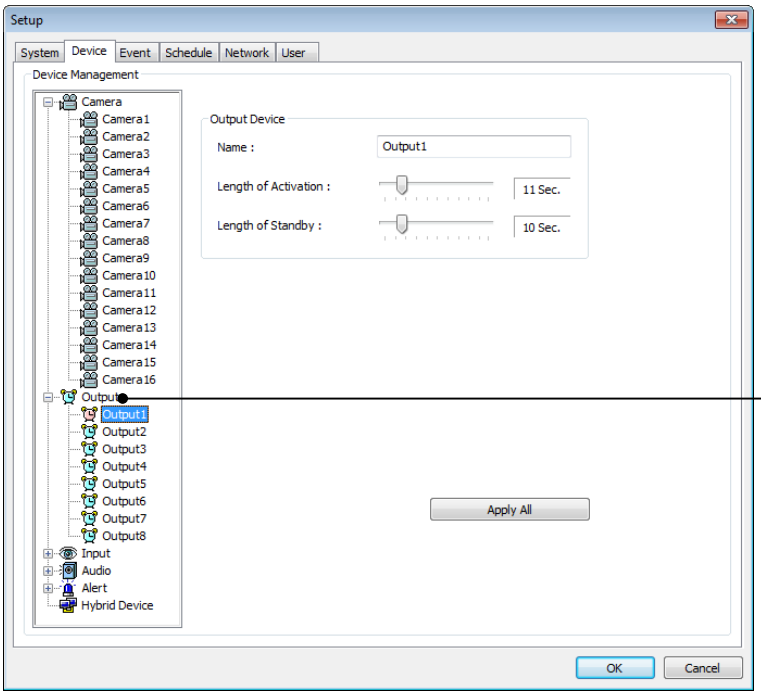


Camera name of TV out can be changed by TV-OUT OSD menu.
Input camera name and press OK button to continue.

● Output Device



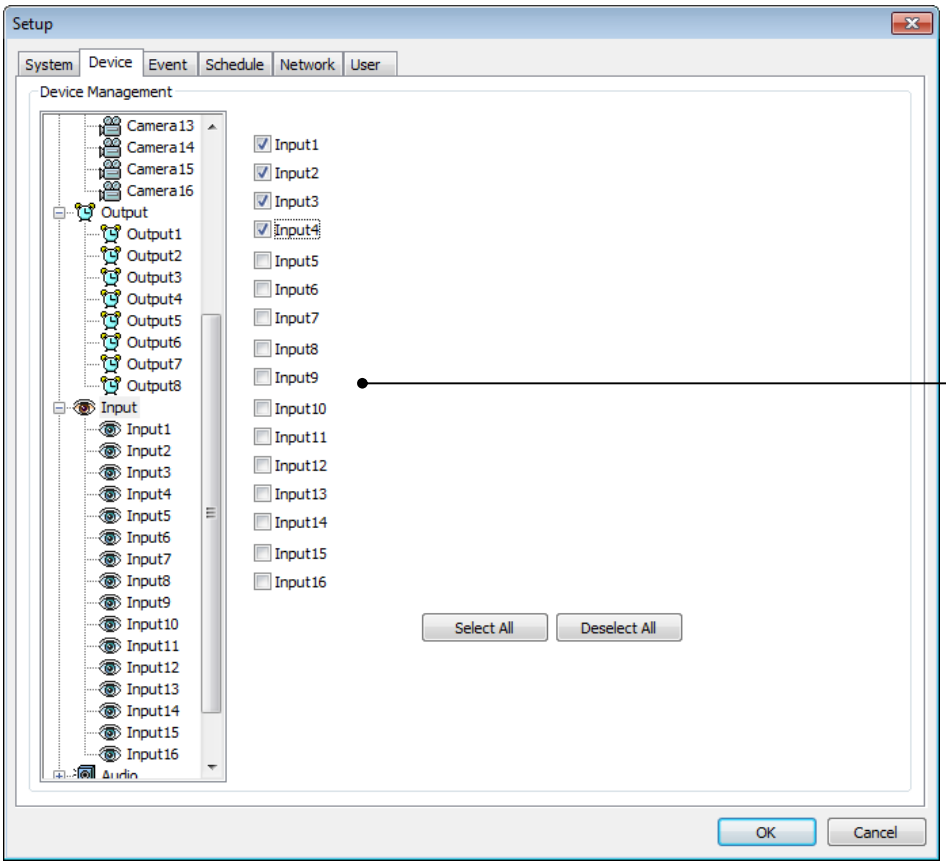
DVR system can be equipped with as many as 8 output devices. Simply check the boxes for use. In addition, outputs can be manually activated from Control screen (Manual Alarm).



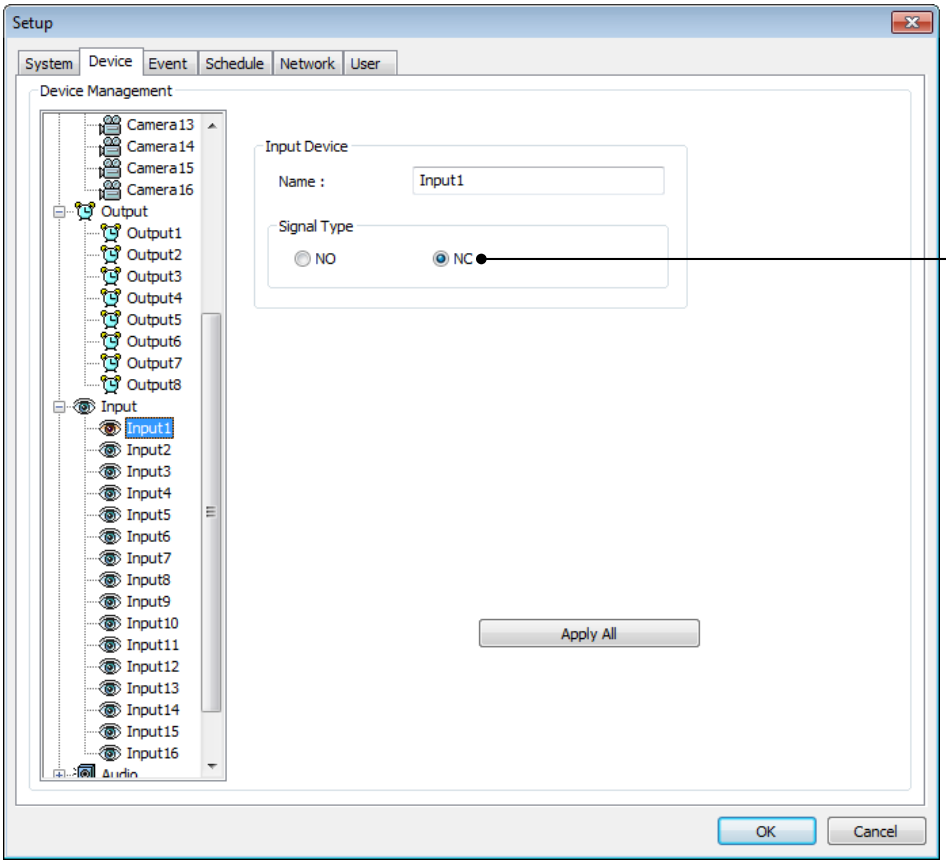
Double-click on “Output” for individual output setup.

Name: Output device name.
Length of Activation: The length of output activation (1-60 sec.).
Length of Standby: The length of output deactivation until reactivation (0-60 sec.).
Apply All: The same settings will be applied to the rest of the output devices.

● Input Device

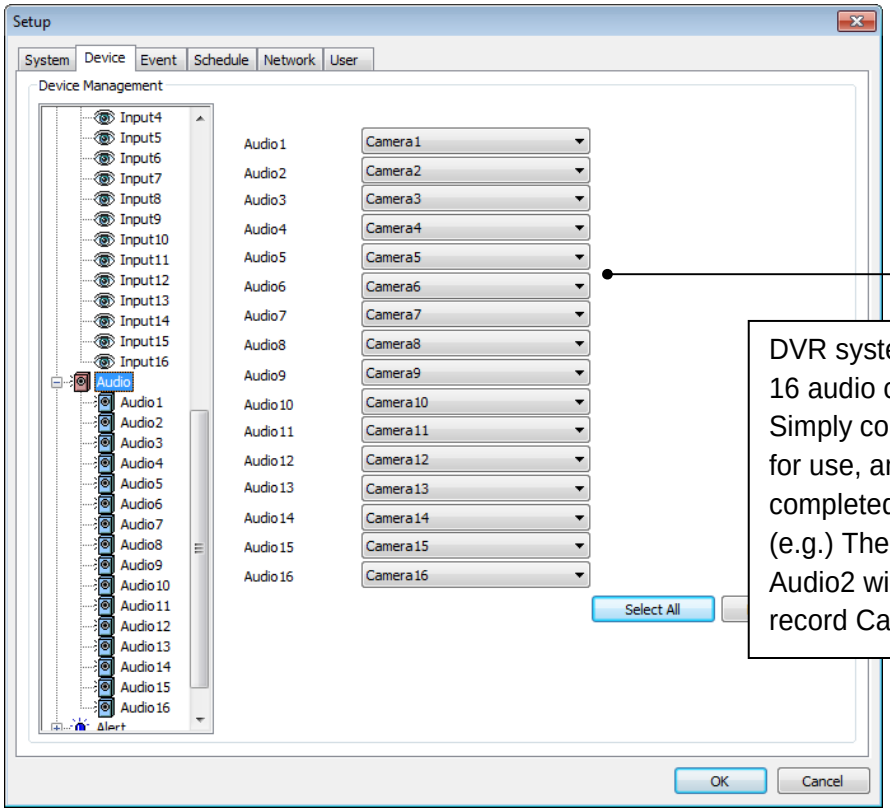


DVR system can be equipped with as many as 16 input devices. Simply check the boxes for use.

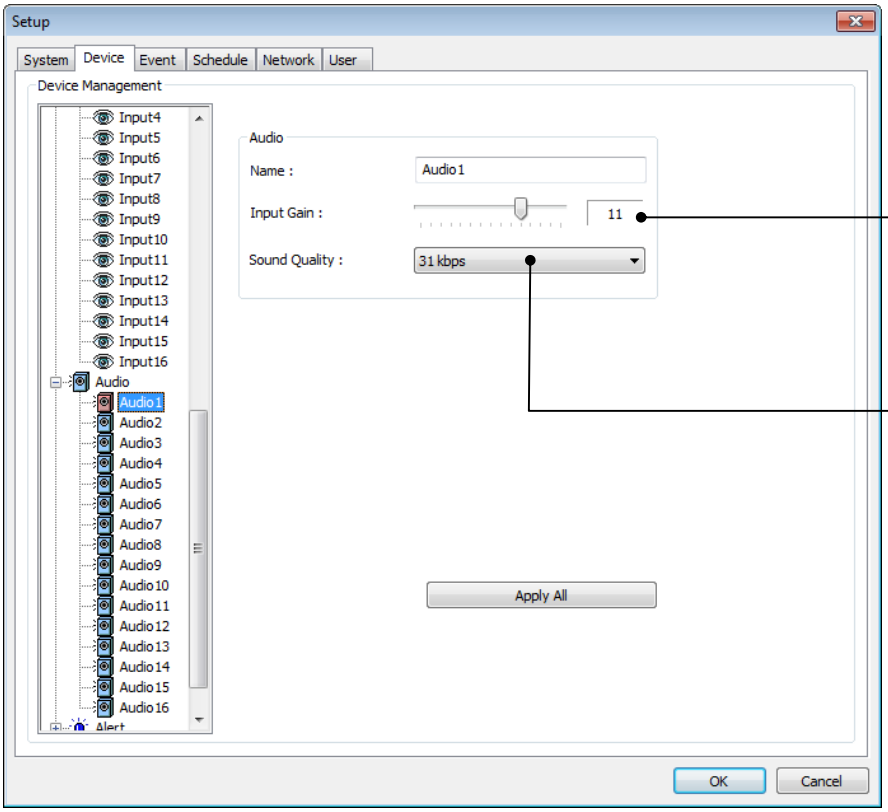


Each and every input can be tuned independently.
Signal Types:
NO(+) & (-) detached normally
NC(+) & (-) attached normally

● Audio



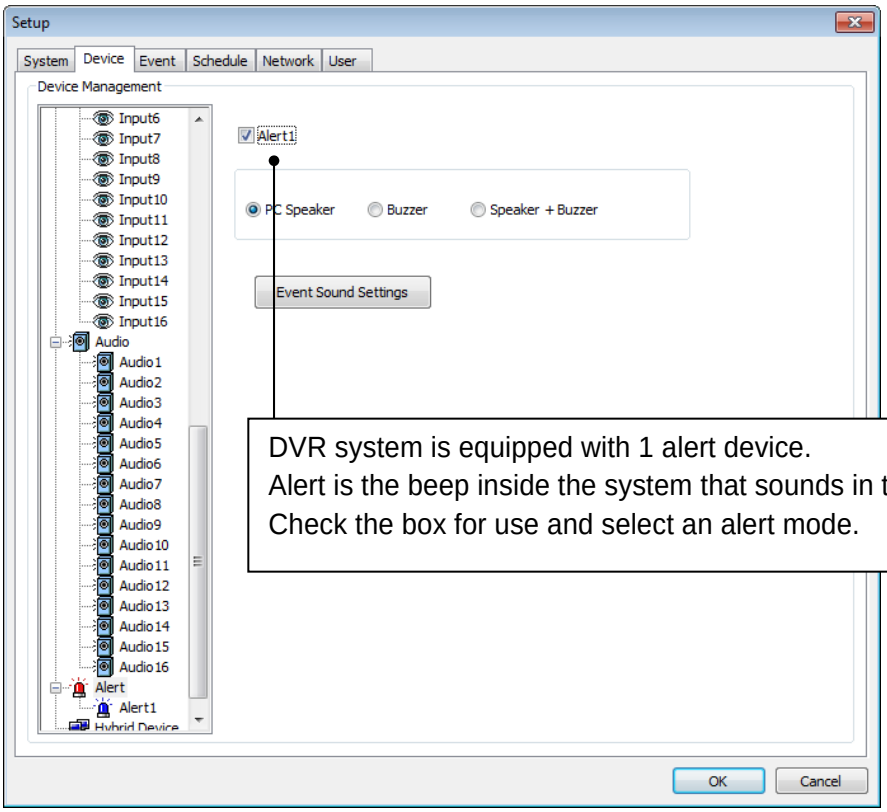
DVR system is equipped with as many as 16 audio channels.
Simply connect cameras to audio channels for use, and audio recording will be completed as chosen.
(e.g.) The above selections indicate that Audio2 will record Camera3, Audio3 will record Camera5, etc.



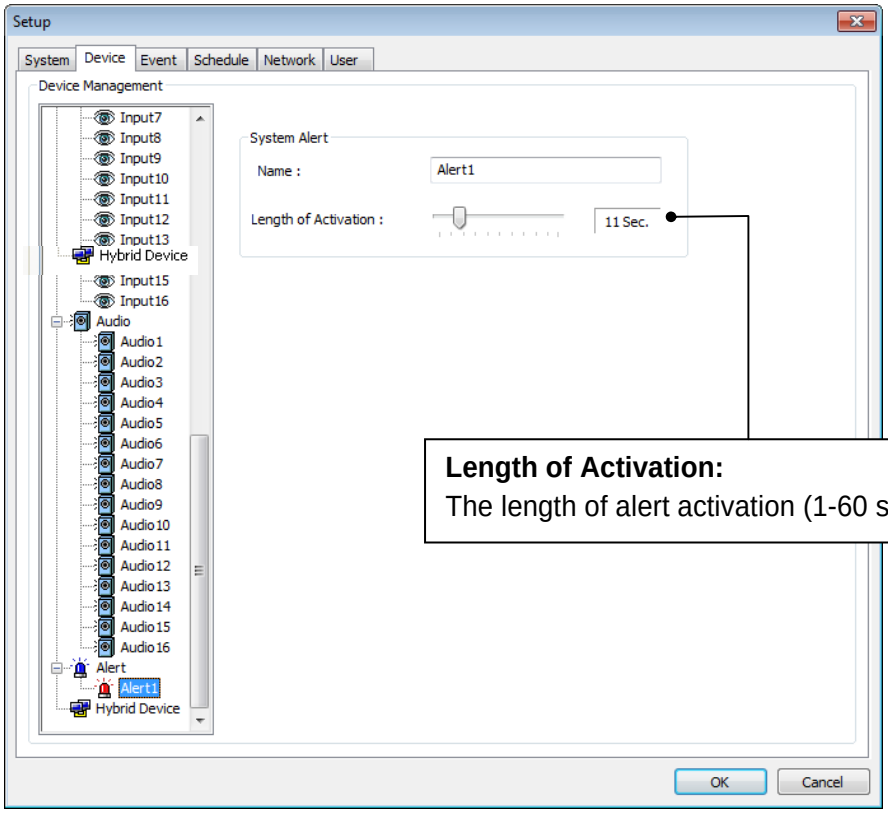
Input Gain (1-15): It is audio level control similar to volume control.

Sound Quality: It is to specify sound quality (15 / 31kbps

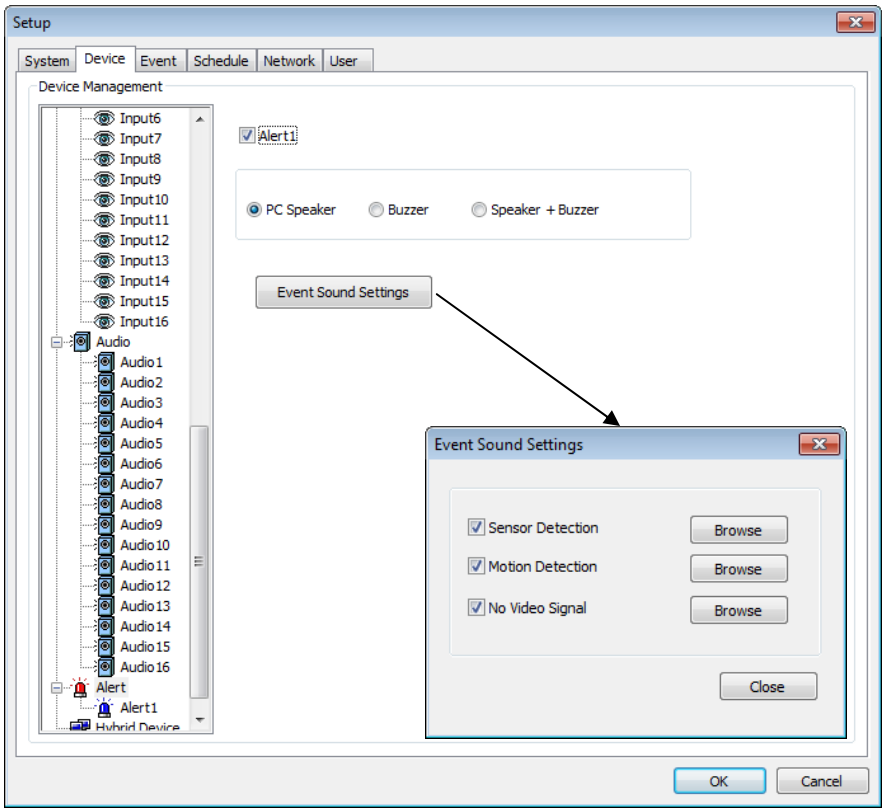
- **Alert**



DVR system is equipped with 1 alert device.
Alert is the beep inside the system that sounds in the case of event.
Check the box for use and select an alert mode.



Length of Activation:
The length of alert activation (1-60 sec.).

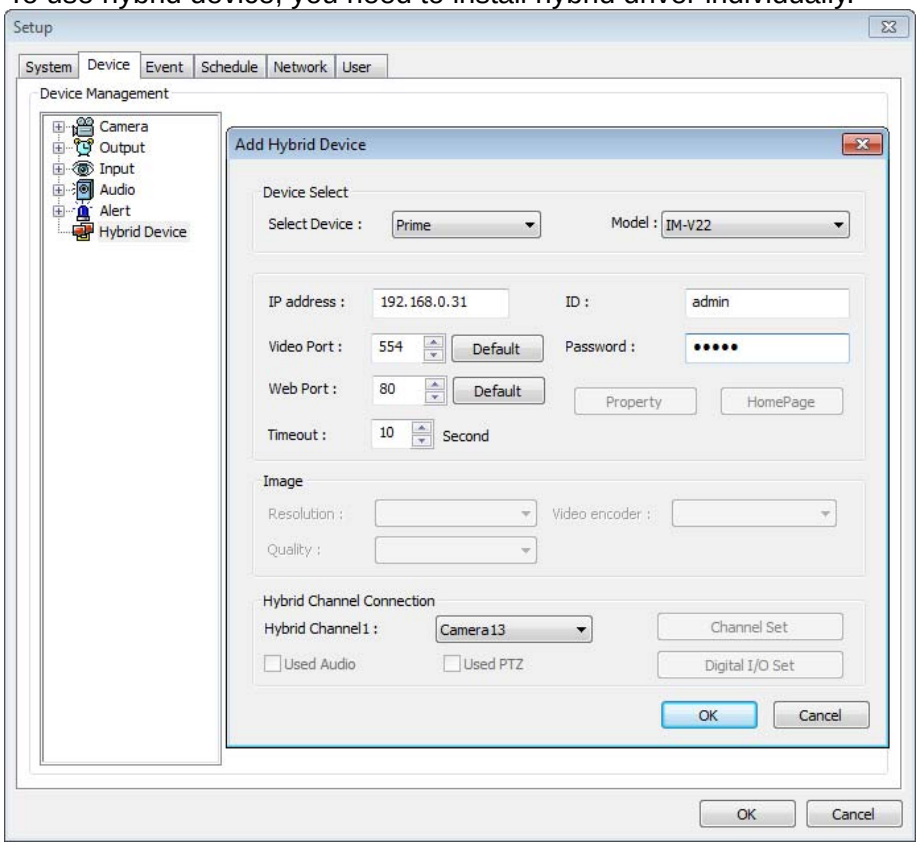


Event Sound Settings:

To differentiate alert sound by Events(Sensor, Motion, and No video Signal), select a Wave File for each.

● Hybrid Device

It is a function that integrates Hybrid devices through network connection.
(IP Camera, Video Server and Standalone DVR series can be installed as Hybrid device)
To use hybrid device, you need to install hybrid driver individually.



How to install Hybrid device driver.

1. Close DVR software and exit to Windows.
2. Install hybrid driver: it is provided as a patch file.
3. After installation, restart DVR then Hybrid device driver will be registered to Magic Radar software automatically.

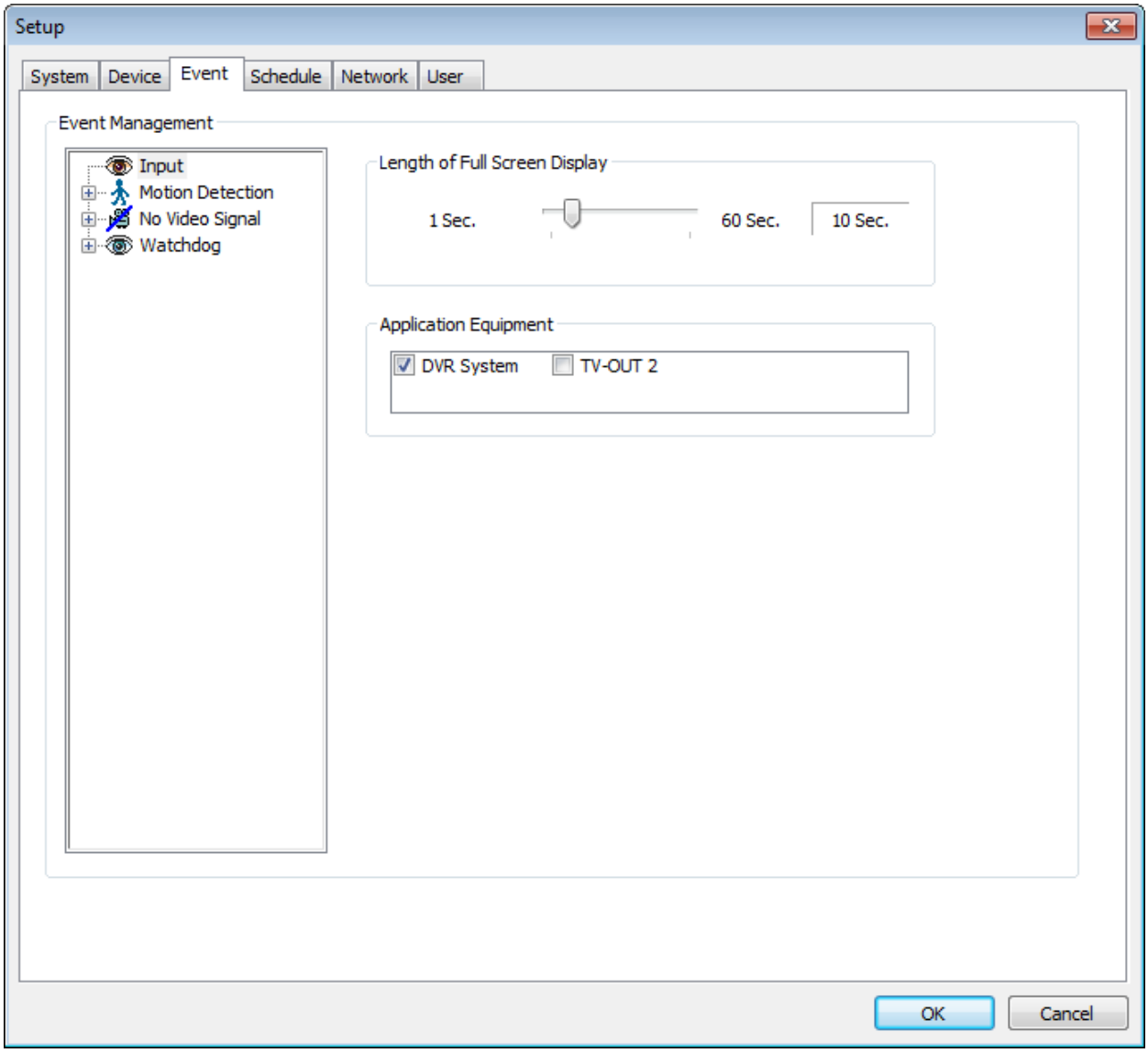
How to setup Hybrid Device:

1. To specify Hybrid channel, disable specified camera.
2. Right click on the Hybrid Device item and click Add button.
3. Select Device to setup
4. Input IP address of device
5. Input data to login (Port number ID and Password)
6. Select Video encoder to connection.
7. Select Hybrid Channel to assign.
   (Notice: Multiple Hybrid channel assign is not allowed. Max 4 Hybrid device driver can be set)
8. Click “Add” button to register and then click “OK” button to continue.

After finish setup Hybrid device, connection will be automatically started.

(3) Event

"Event" consists of 3 different groups; "Input", "Motion Detection" and "No Video Signal".
On this menu, devices can be set to respond to different events.

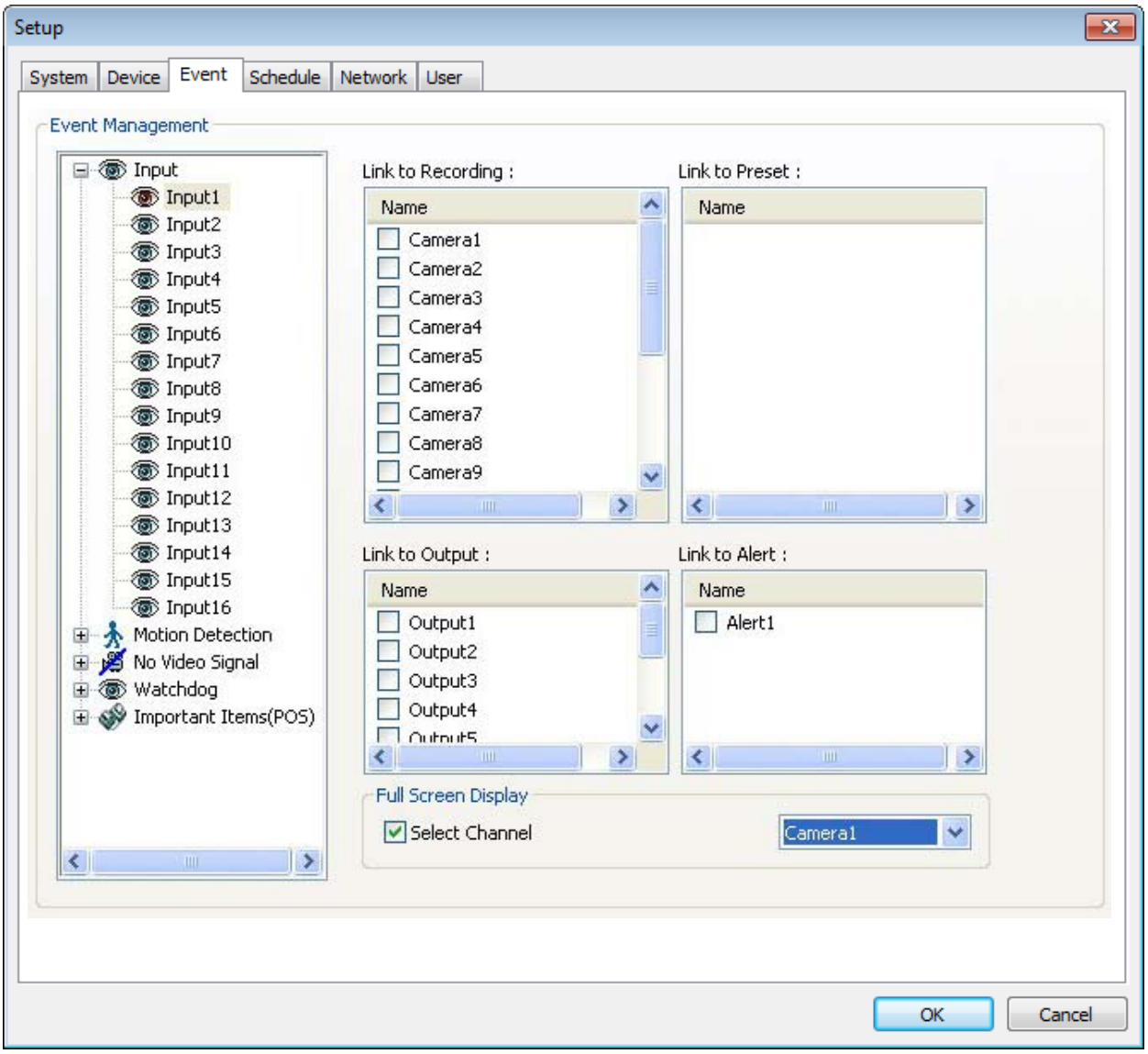


● Input

Length of Full Screen Display:
The time length for full screen display in the case of input device activation.

Full Screen Display Channels: Full Screen Display:
Selected camera channel will pop up if the linked input device is triggered.

Application Equipment:
Events triggered by Input or Motion detection can pop on a desired screen among DVR system, DVR+ TV-OUT2.



Link to Recording:

One Input device can have as many as 16 recording cameras on activation.

The below example shows that Camera1 will record in the case of Input1 activation.

Link to Output:

One Input device can have as many as 8 activating output devices on activation.

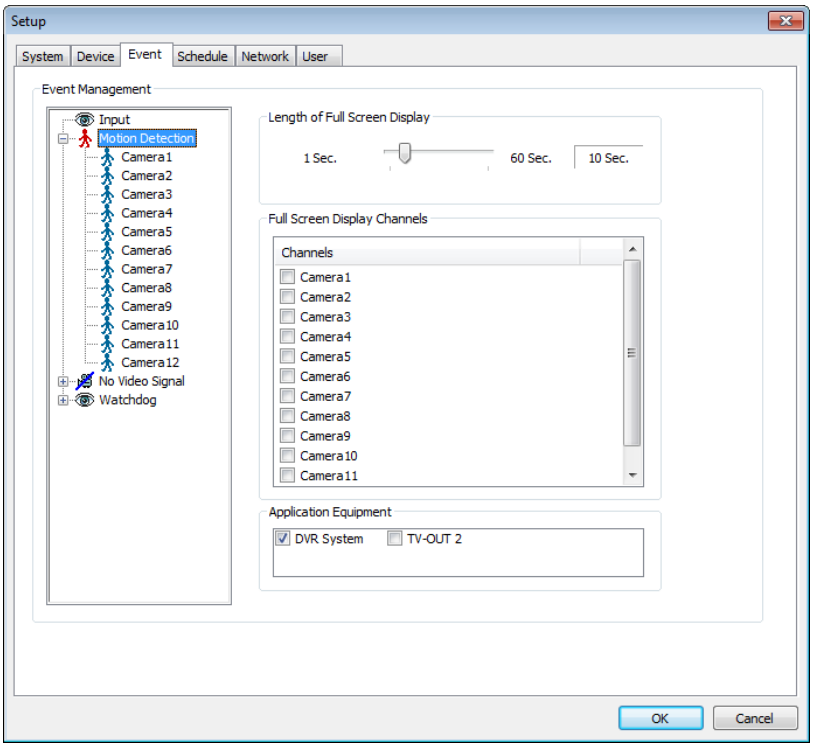
The above example shows that Output1 will be activated in the case of Input1 activation.

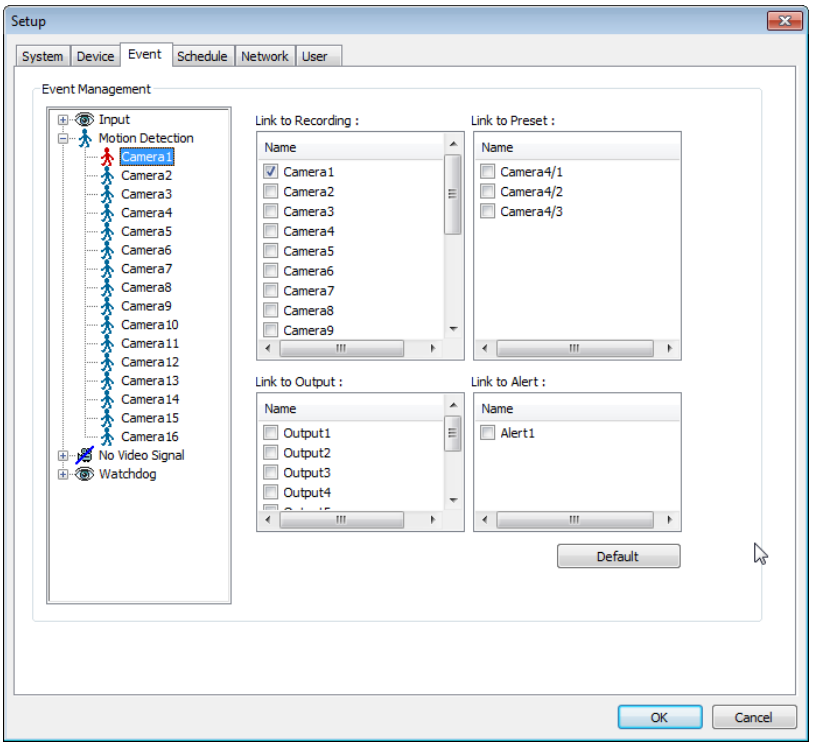
Link to Alert:

Input device can also be linked to alert.

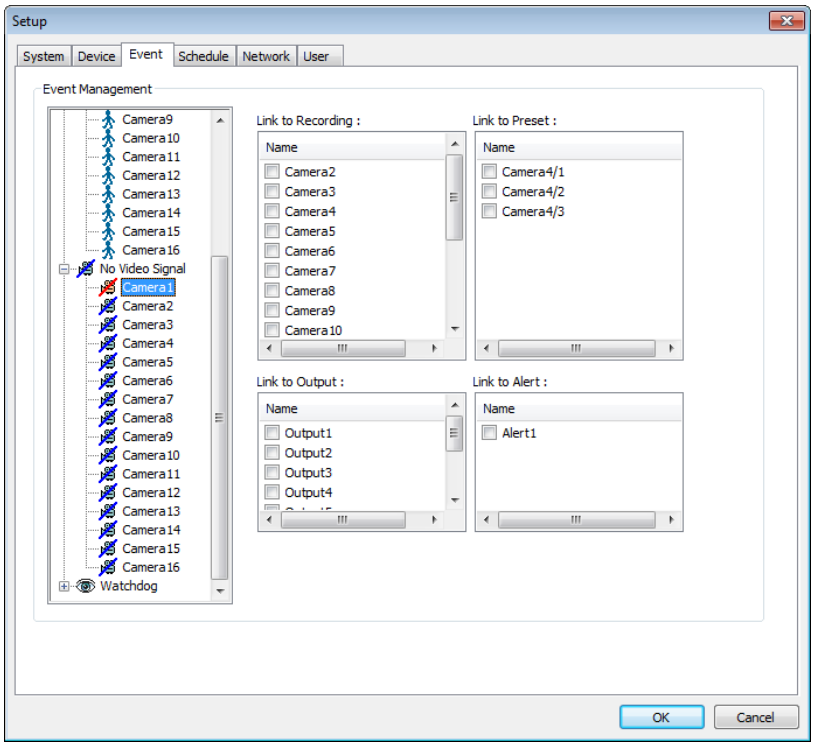
● Motion Detection

The same identical concepts and methods as “Input” are applied to “Motion Detection”.



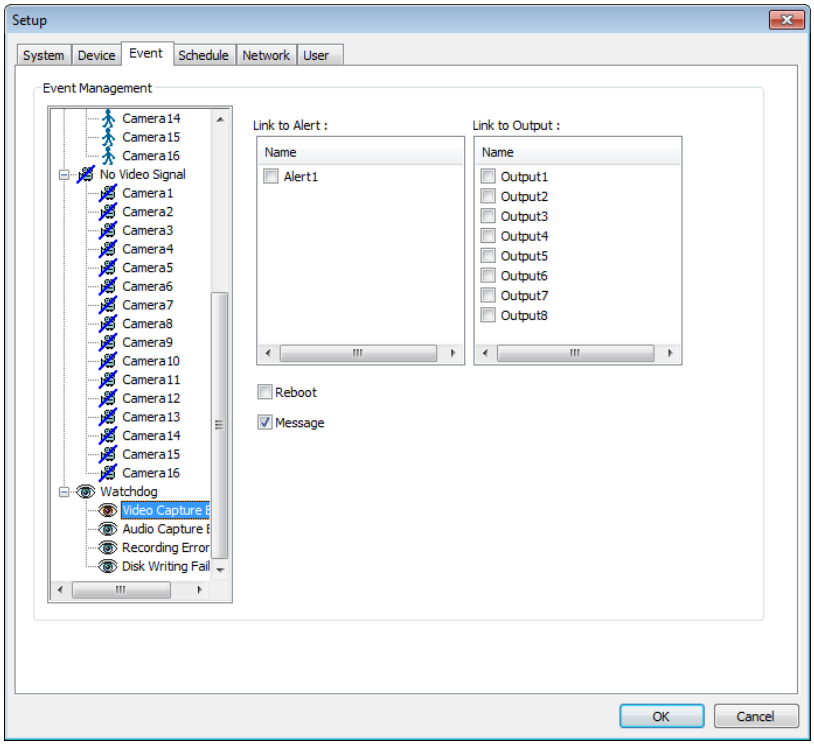


● No Video Signal

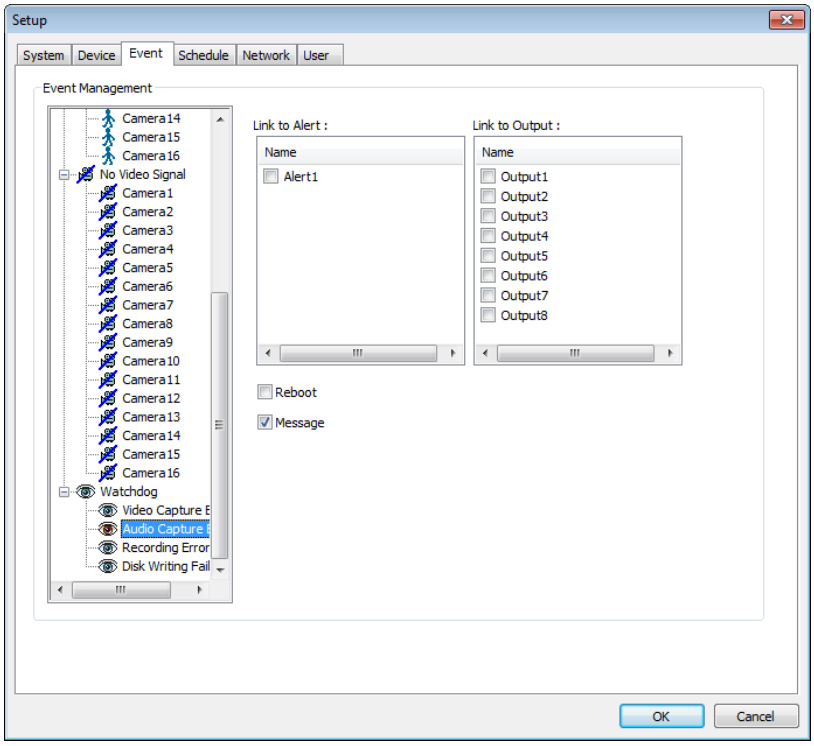


The same identical concepts and methods as “Input” are applied to “No Video Signal”.

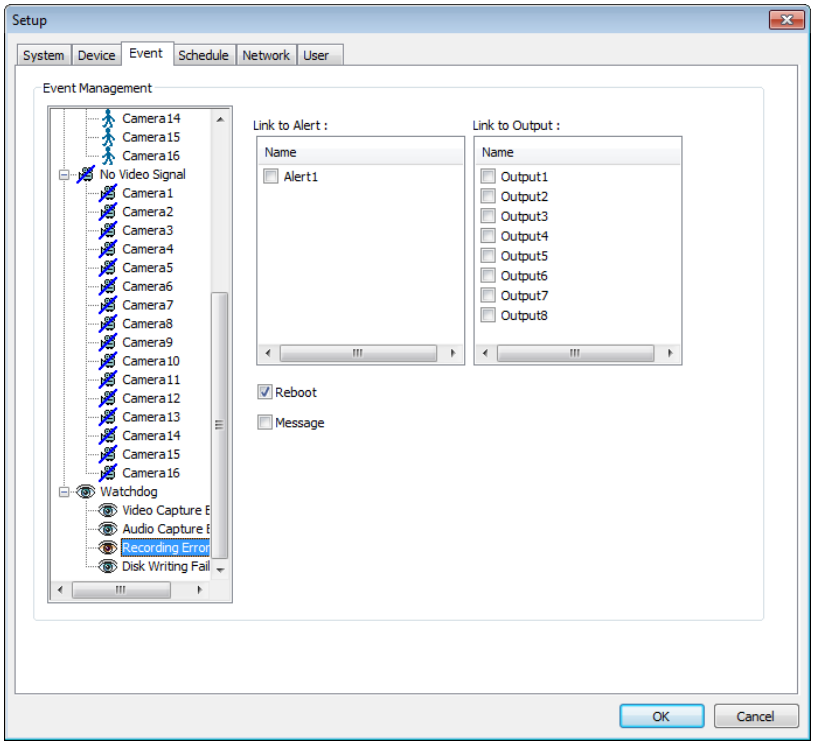
● Watchdog



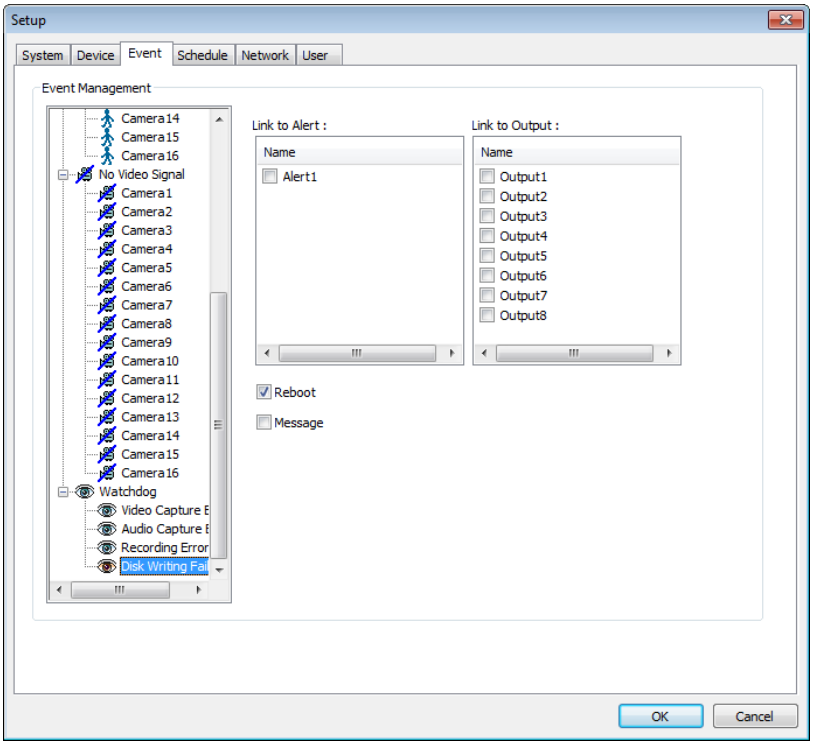
The same identical concepts and methods as “Input” are applied to “Watchdog”. When “Video Capture Error” is occurred, it is linking to Alert and Output. User can link the event to Reboot, Message on DVR.



The same identical concepts and methods as “Input” are applied to “Audio Capture Error”.
When “Audio Capture Error” is occurred, it is linking to Alert and Output.
User can link the event to Reboot, Message on DVR.



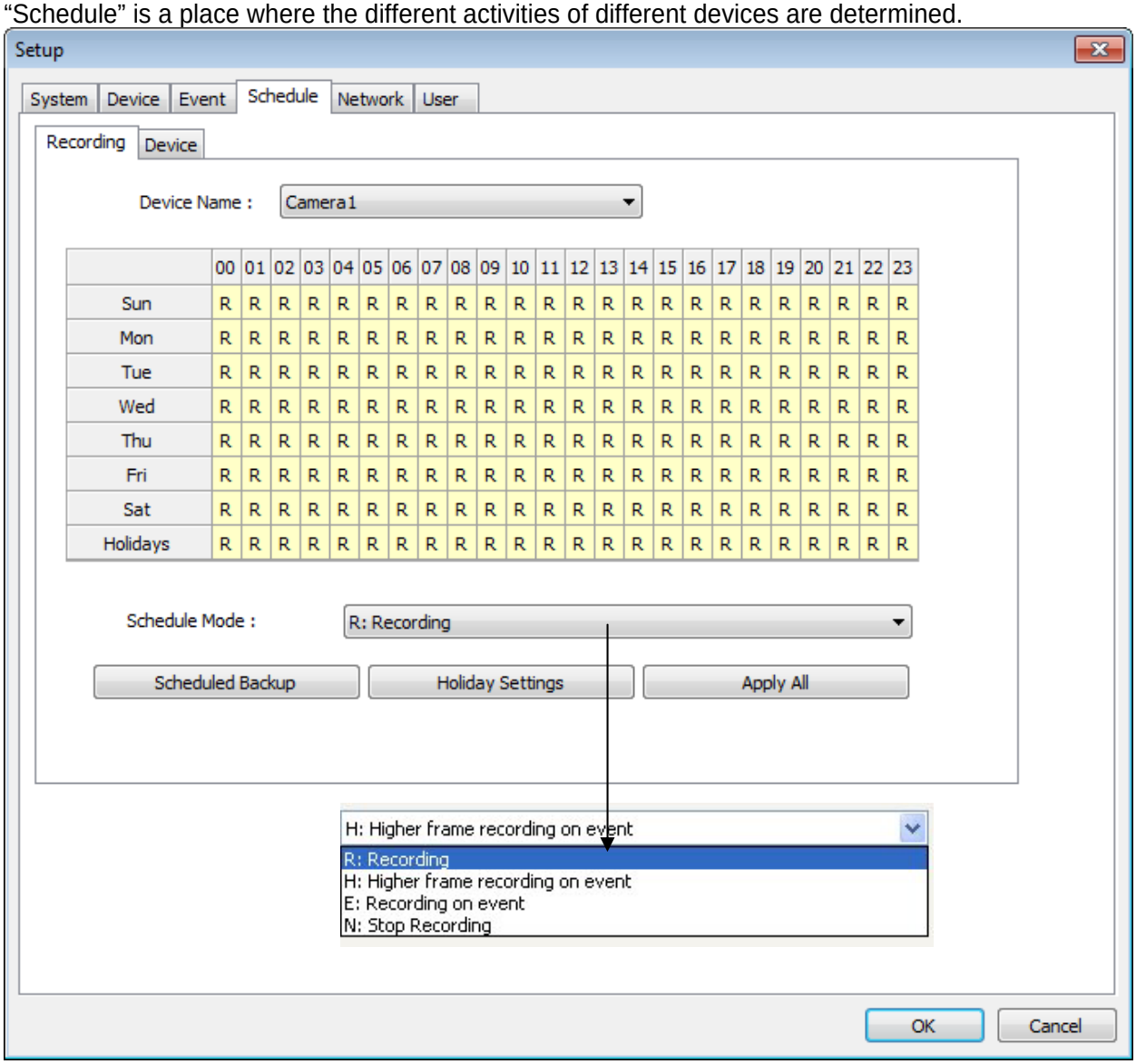
The same identical concepts and methods as “Input” are applied to “Recording Error”.
When “Recording Error” is occurred, it is linking to Alert and Output.
User can link the event to Reboot, Message on DVR.



The same identical concepts and methods as “Input” are applied to “Disk Writing Failed”
When “Disk Writing Failed” is occurred, it is linking to Alert and Output.
User can link the event to Reboot, Message on DVR.

(4) Schedule

"Schedule" is a place where the different activities of different devices are determined.


Setup
System
Device
Event
Schedule
Network
User
Recording
Device
Device Name :
Camera1
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23
Sun R R R R R R R R R R R R R R R R R R R R R R R R
Mon R R R R R R R R R R R R R R R R R R R R R R R R
Tue R R R R R R R R R R R R R R R R R R R R R R R R
Wed R R R R R R R R R R R R R R R R R R R R R R R R
Thu R R R R R R R R R R R R R R R R R R R R R R R R
Fri R R R R R R R R R R R R R R R R R R R R R R R R
Sat R R R R R R R R R R R R R R R R R R R R R R R R
Holidays R R R R R R R R R R R R R R R R R R R R R R R R
Schedule Mode :
R: Recording
Scheduled Backup
Holiday Settings
Apply All
H: Higher frame recording on event
R: Recording
H: Higher frame recording on event
E: Recording on event
N: Stop Recording
OK
Cancel

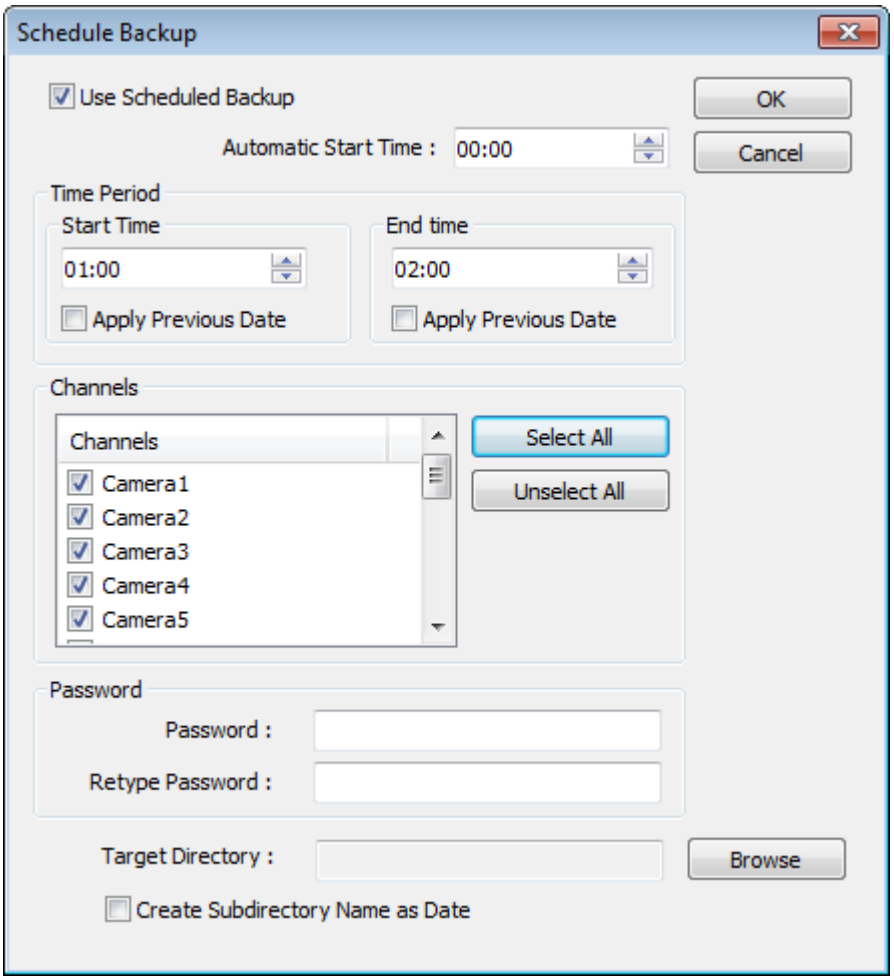
Each camera can have different recording options; scheduled recording by time & day and selective recording.

R: Recording at all times

E: Recording on event

N: Stop recording

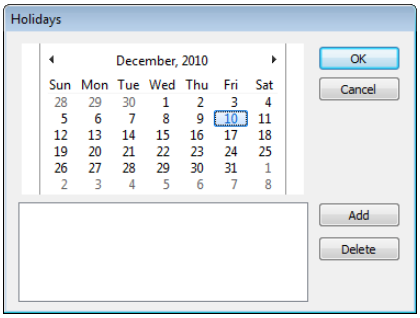
H: Recording at all times and higher frame recording on event



Use Scheduled Backup: To set backup automatically.

Please refer to next to example.
Automatic Start Time: At 1 a.m. it automatically starts back up.

Time Period
From: When “Apply Previous Date” is checked, 2 a.m. means yesterday. If not, it is coming 2 a. m.
To: Same concept as “From”.
Channel: Cameras wish to backup.
Select All: Select all cameras
Password: Give password to play back back up data.
Retype Password: Retype password to double confirm.
Target Directory: Selects directory to backup.
Create Subdirectory Name as Date: Gives created directory name based on the date.



The holiday recording schedule set at the bottom of the “Schedule” table will be applied to selected dates.

● Manual (Instant) Recording

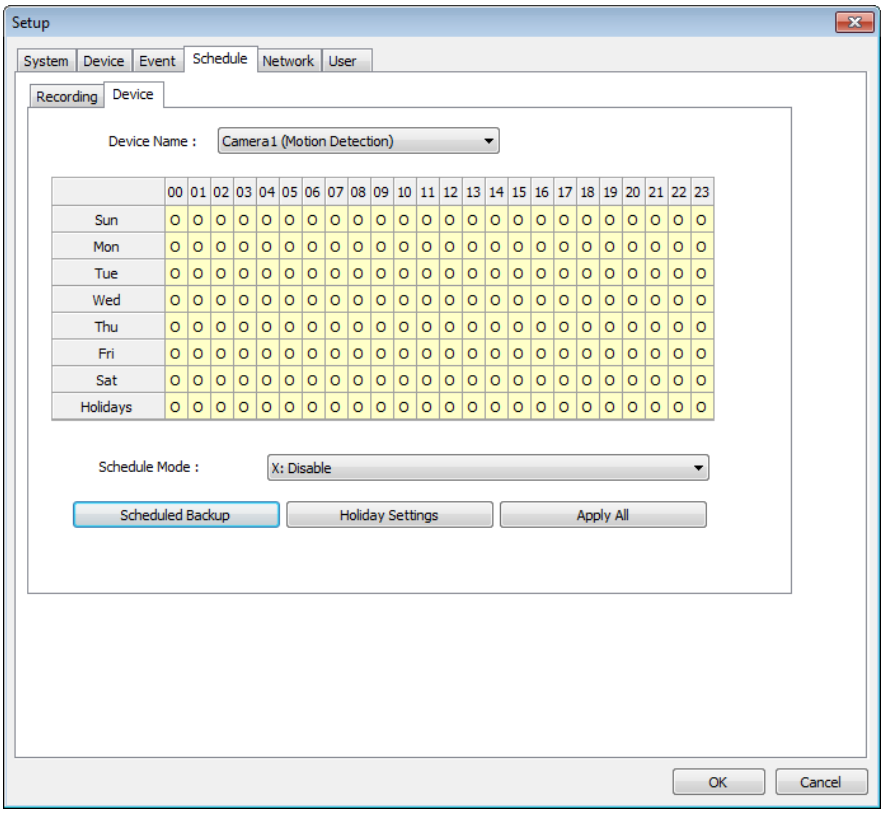
It is a function that enables users to react on an emergency situation properly by making DVR start recording immediately.

.

1. The purple icon indicates that it is on “Manual Recording”.
2. Only ‘Admin’ can use “Manual recording”.

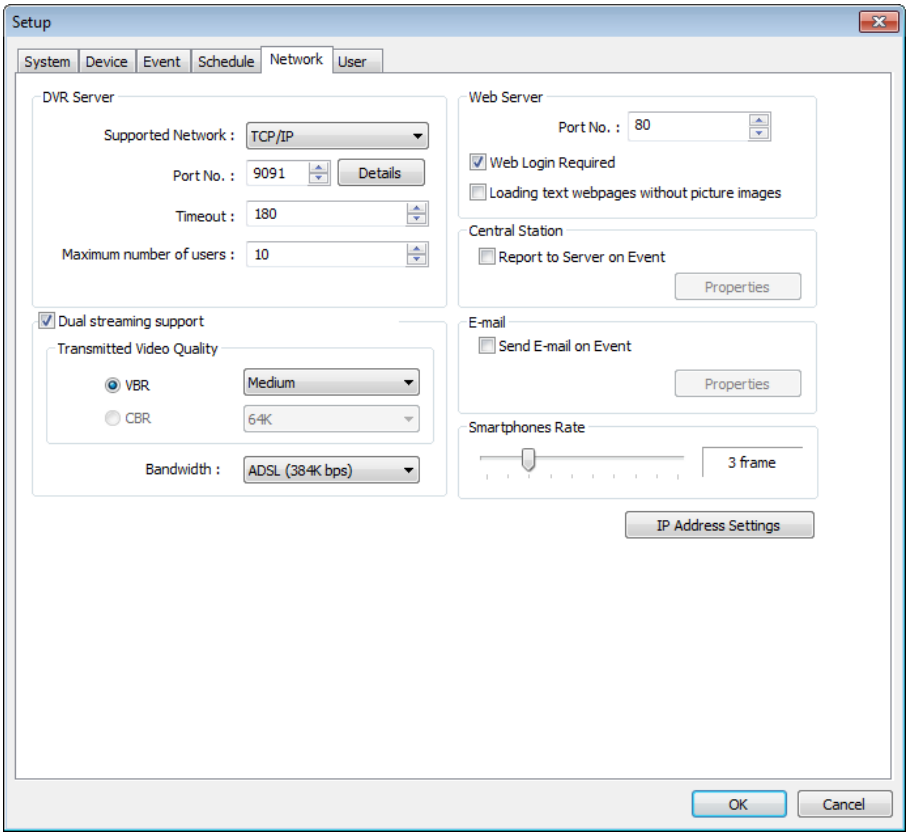
Start “Manual Recording” by selecting “Recording On”. Stop “Manual Recording” by selecting “Recording Off”.

- **Device**

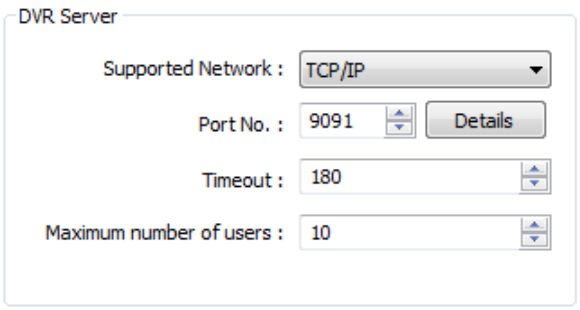


Select detailed schedule for activating sensor and alarm individually.

(5) Network



● DVR Server

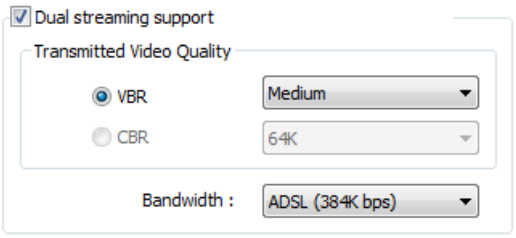


Supported Network:

1. TCP/IP - Connecting to DVR Server from Client using Lan or DSL
2. PSTN - Connecting to DVR Server from Client using PSTN or ISDN modem
3. Not In Use - Not allowed to connect to DVR Server remotely

Port No.: The default port number is 9091.
Timeout: The time length of trials to connect to DVR Server from Client
Maximum Number of Users: The maximum number of users that can be logged in remotely.
Details: It shows all the port numbers that are available to use.

Note:
DVR will automatically appoint a proper IP address to router. No router setup required.



● Dual streaming support

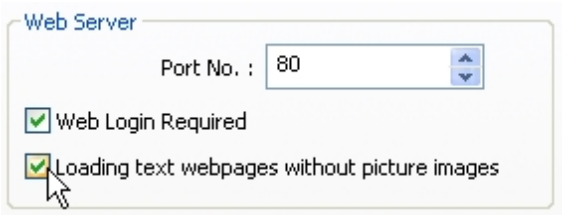
Transmitted Video Quality:
Video quality to be transmitted to Client.
As a reminder, the higher video quality gets, the slower network transmission speed becomes.
Therefore, it is often recommended to select low video quality when using “Narrowband”.

Bandwidth:
Make sure to select the right bandwidth to have the right network performance.

By default, Magic Radar support VBR (Variable Bit Rate
Only X948 (H.264 Hardware compression) support CBR (Constant Bit Rate)

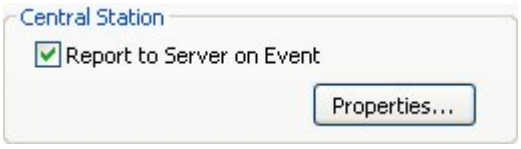
Notice!: Software H.264 version doesn’t support dual streaming.
Therefore to use dual streaming function, it is recommended to use MPEG4 software or Hardware codec H.264 capture card.

● Web Server

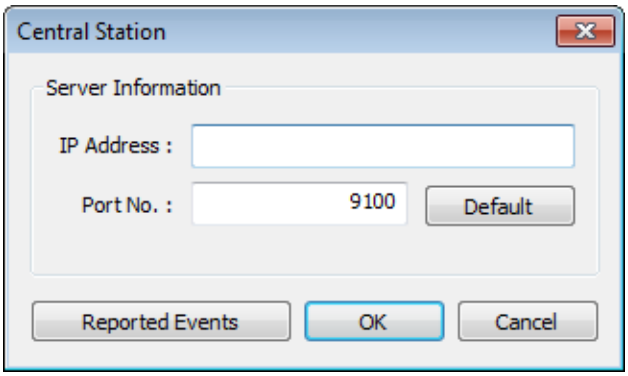


Port No.: Fixed HTTP Port No.
Web Login Required:
If the box is checked, login is required when connecting to DVR server using web browser.
If the box is NOT checked, automatic login as “anonymous” will be done.
Loading text webpages without picture images:
If the box is checked, it takes less time to download initial page of web browser. It downloads only text, not graphic user interface.

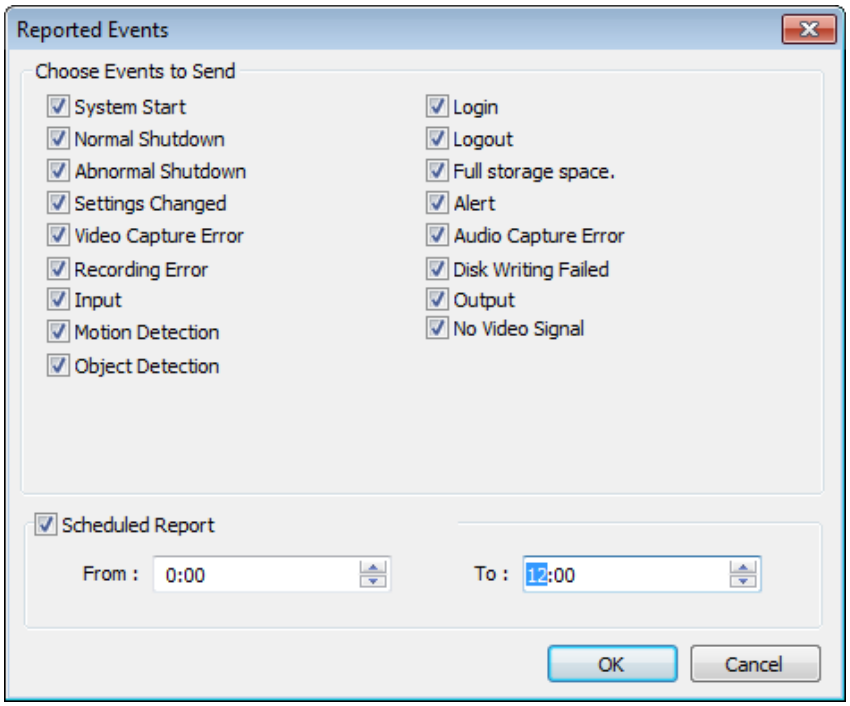
● Central Station



Central Station” is a function that enables Client with static IP to manage multi DVR sites.
Check the box and click on “Properties” for setup.
Note: “i-CEN’S” must be installed on Central Station Server (Client).
For more details, ask your supplier for proper instruction.

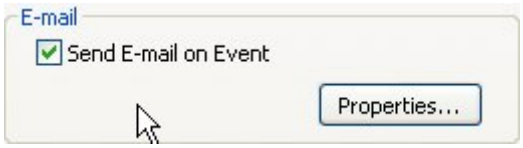


Type in the IP address of Central Station Server (Client with Static IP) and click on “Reported Events” for more setup.

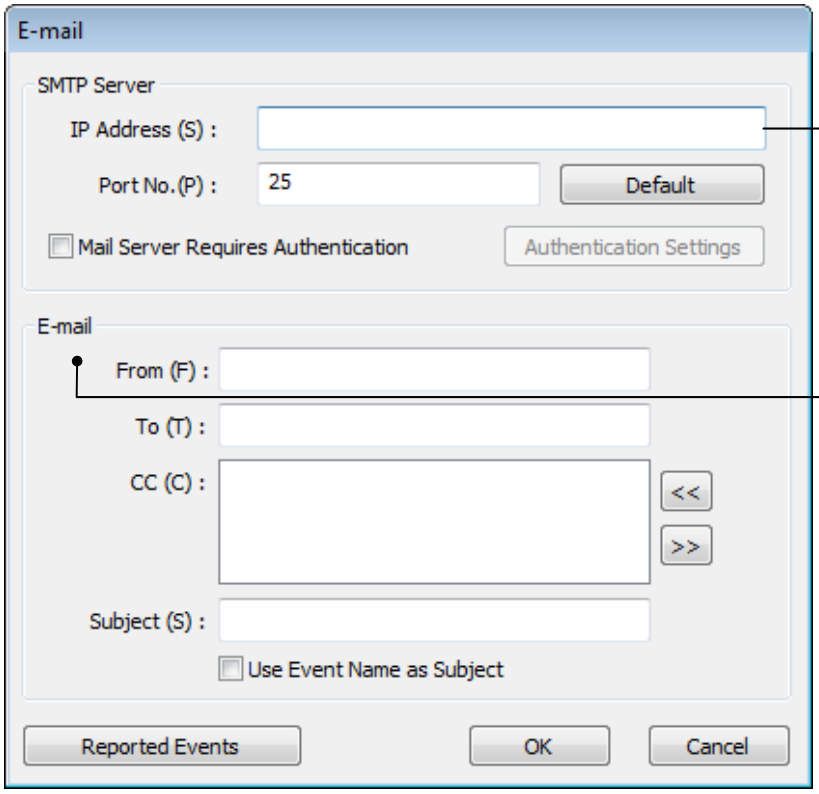


Choose events to report to Central Station server and set reporting time period.

● E-mail

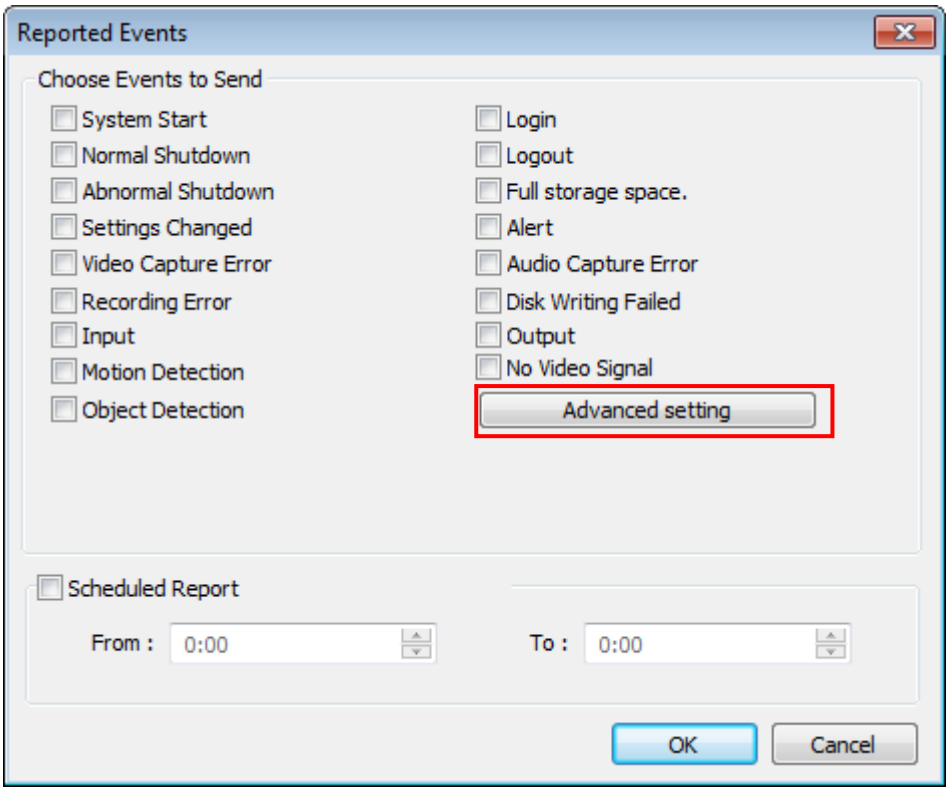


E-mail is a function that enables DVR system to send out e-mails when selected events occur.
Check the box and click on “Properties” for setup.

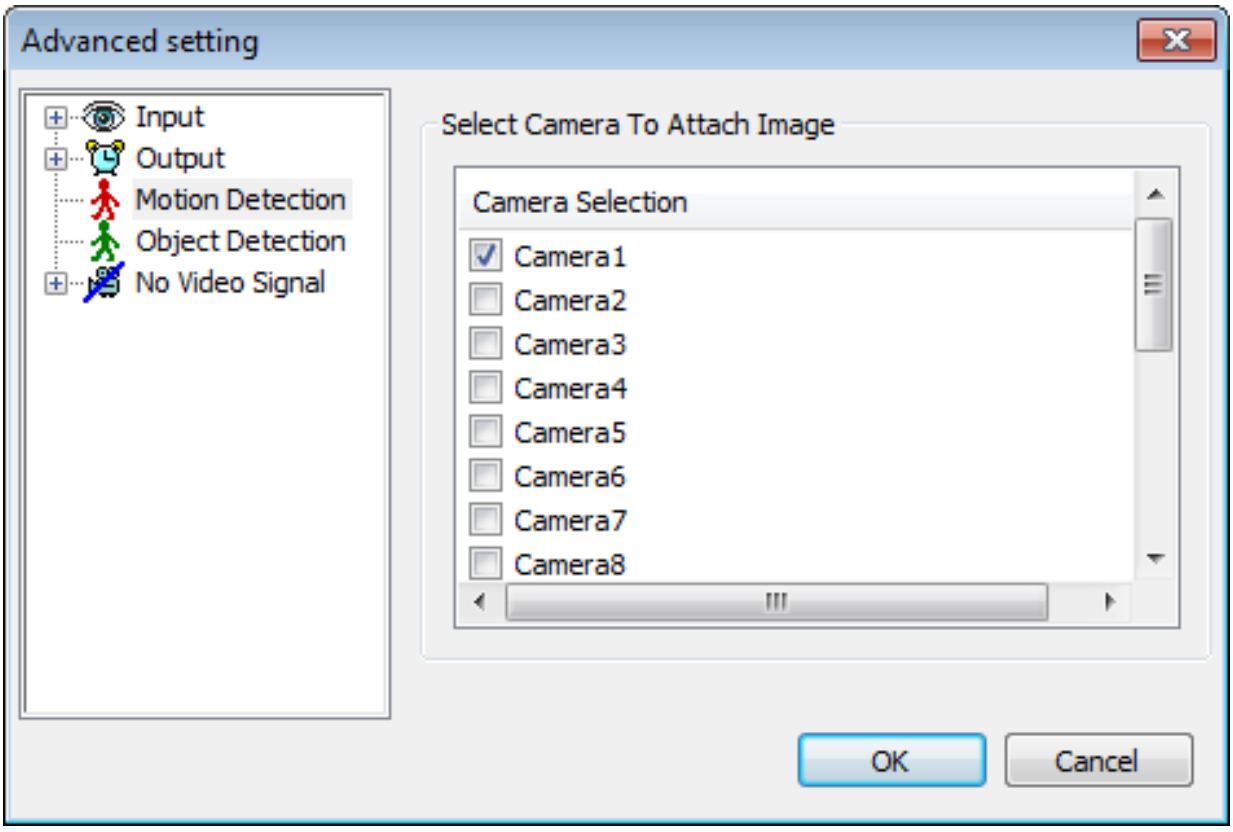


Make sure to put in the right IP address of SMTP server. Then, click on “Reported Events” for more setup. The “Reported Events” menu is the same as Central Station.

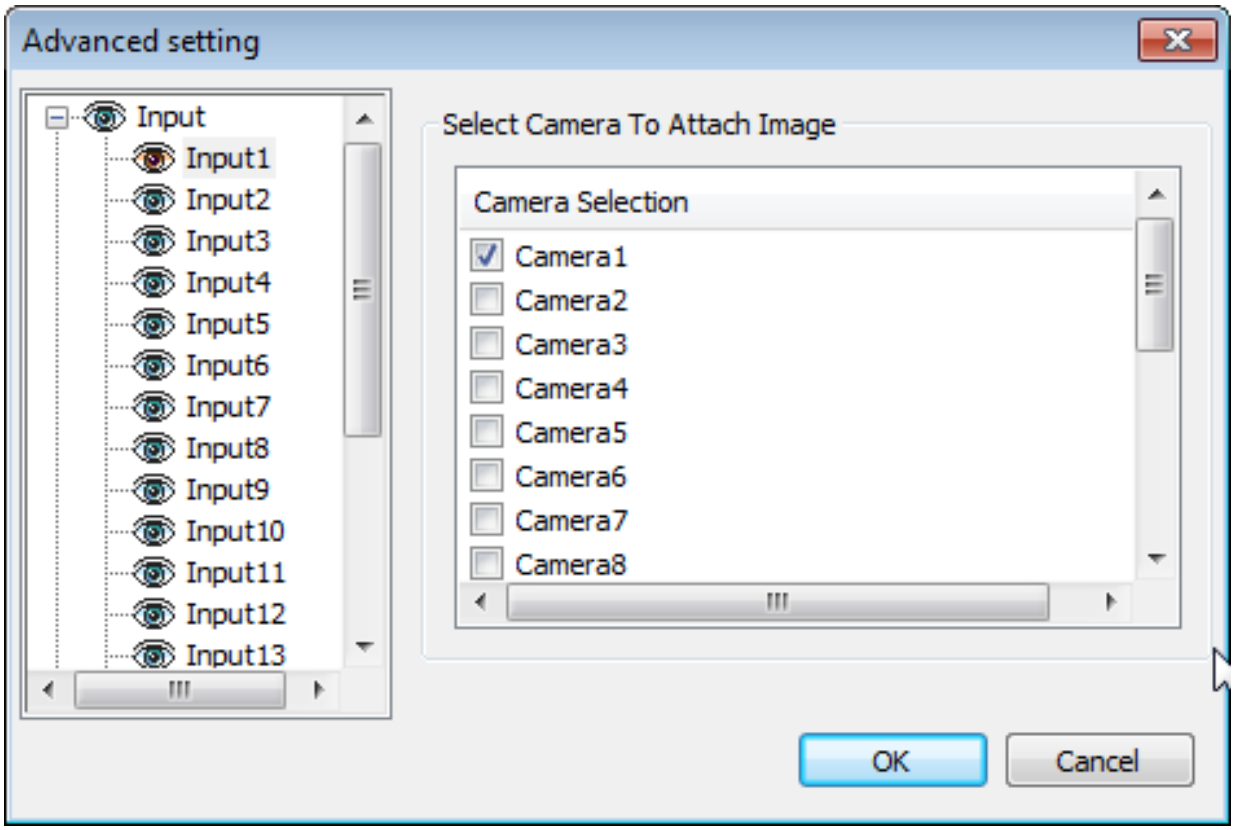
Note: Some e-mail server may require authentication for ID and PW.

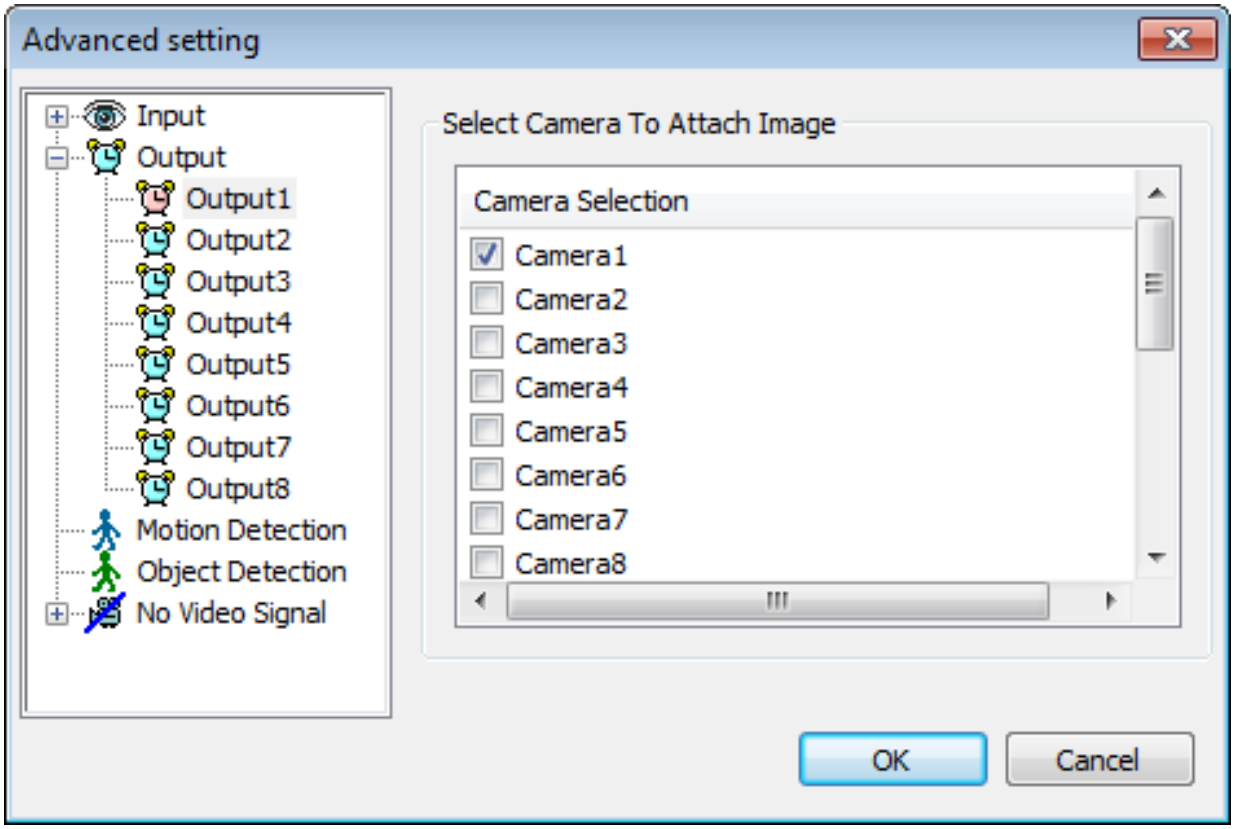


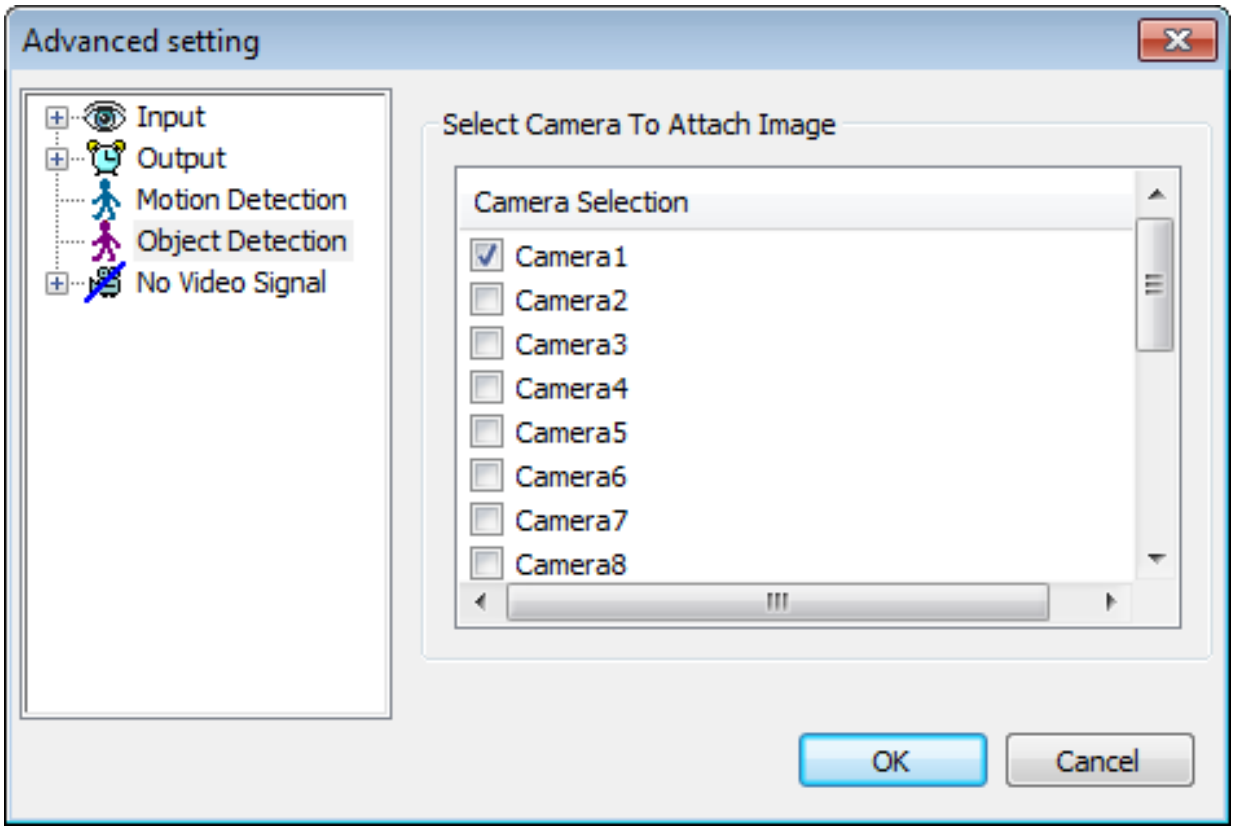
Click “Advanced setting” to select cameras to attach image.

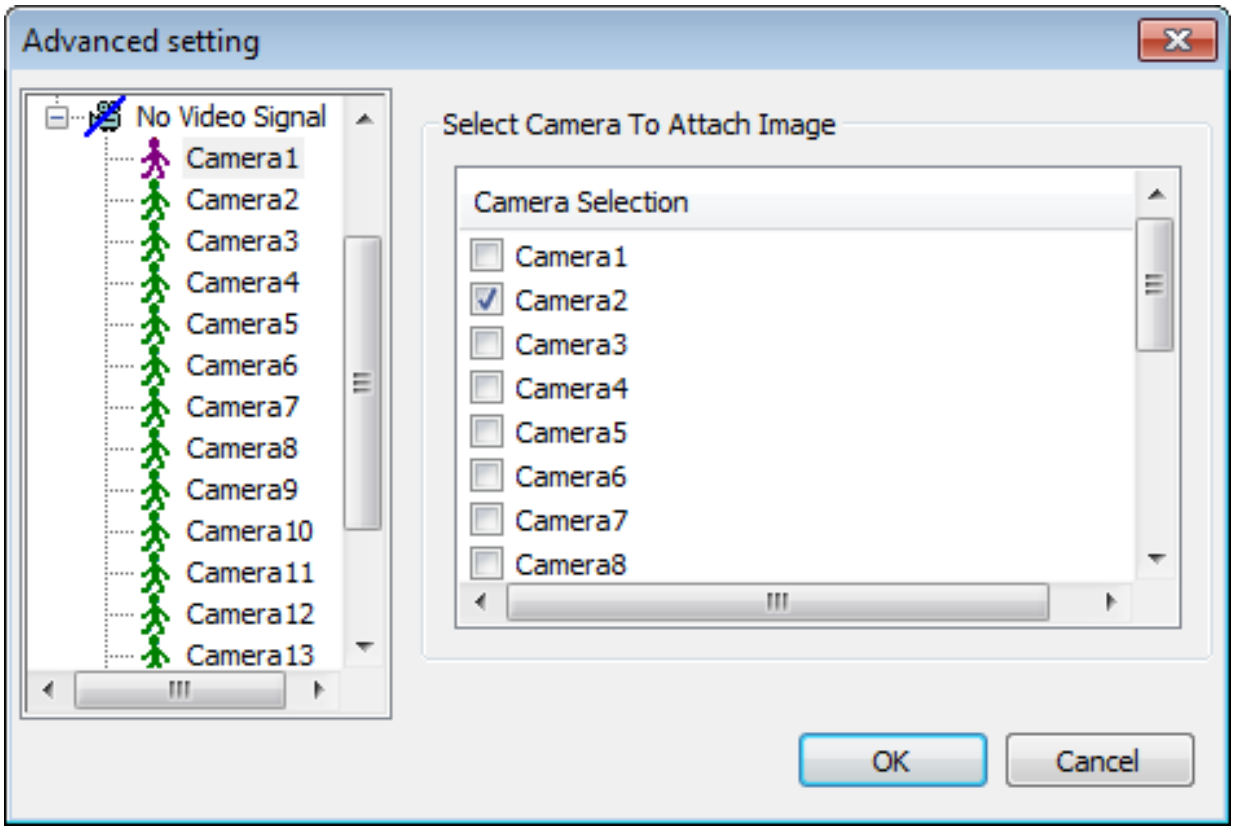


Send camera(s) to send out image(s) when the event occurs.


Advanced setting
Input
Input1
Input2
Input3
Input4
Input5
Input6
Input7
Input8
Input9
Input10
Input11
Input12
Input13
Select Camera To Attach Image
Camera Selection
Camera1
Camera2
Camera3
Camera4
Camera5
Camera6
Camera7
Camera8
OK
Cancel


Advanced setting
Input
Output
Output1
Output2
Output3
Output4
Output5
Output6
Output7
Output8
Motion Detection
Object Detection
No Video Signal
Select Camera To Attach Image
Camera Selection
Camera1
Camera2
Camera3
Camera4
Camera5
Camera6
Camera7
Camera8
OK
Cancel

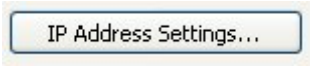

Advanced setting
Input
Output
Motion Detection
Object Detection
No Video Signal
Select Camera To Attach Image
Camera Selection
Camera1
Camera2
Camera3
Camera4
Camera5
Camera6
Camera7
Camera8
OK
Cancel


Advanced setting
No Video Signal
Camera1
Camera2
Camera3
Camera4
Camera5
Camera6
Camera7
Camera8
Camera9
Camera10
Camera11
Camera12
Camera13
Select Camera To Attach Image
Camera Selection
Camera1
Camera2
Camera3
Camera4
Camera5
Camera6
Camera7
Camera8
OK
Cancel

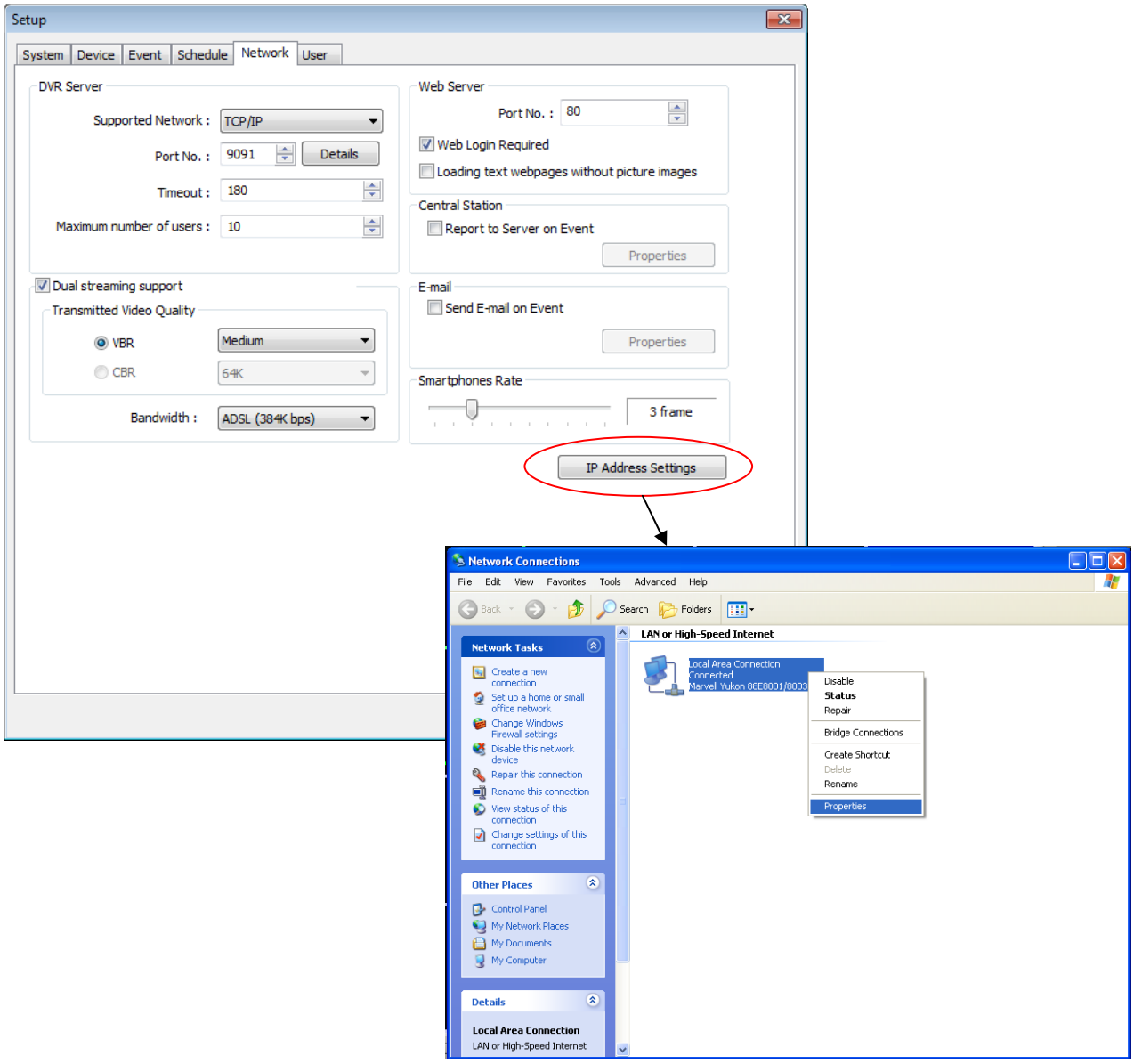
● Smartphones Rate

Adjust smartphone transmit frame rate by set “Smartphones Rate”
(1 frame ~ 10 frames per second.)

● IP Address Setup



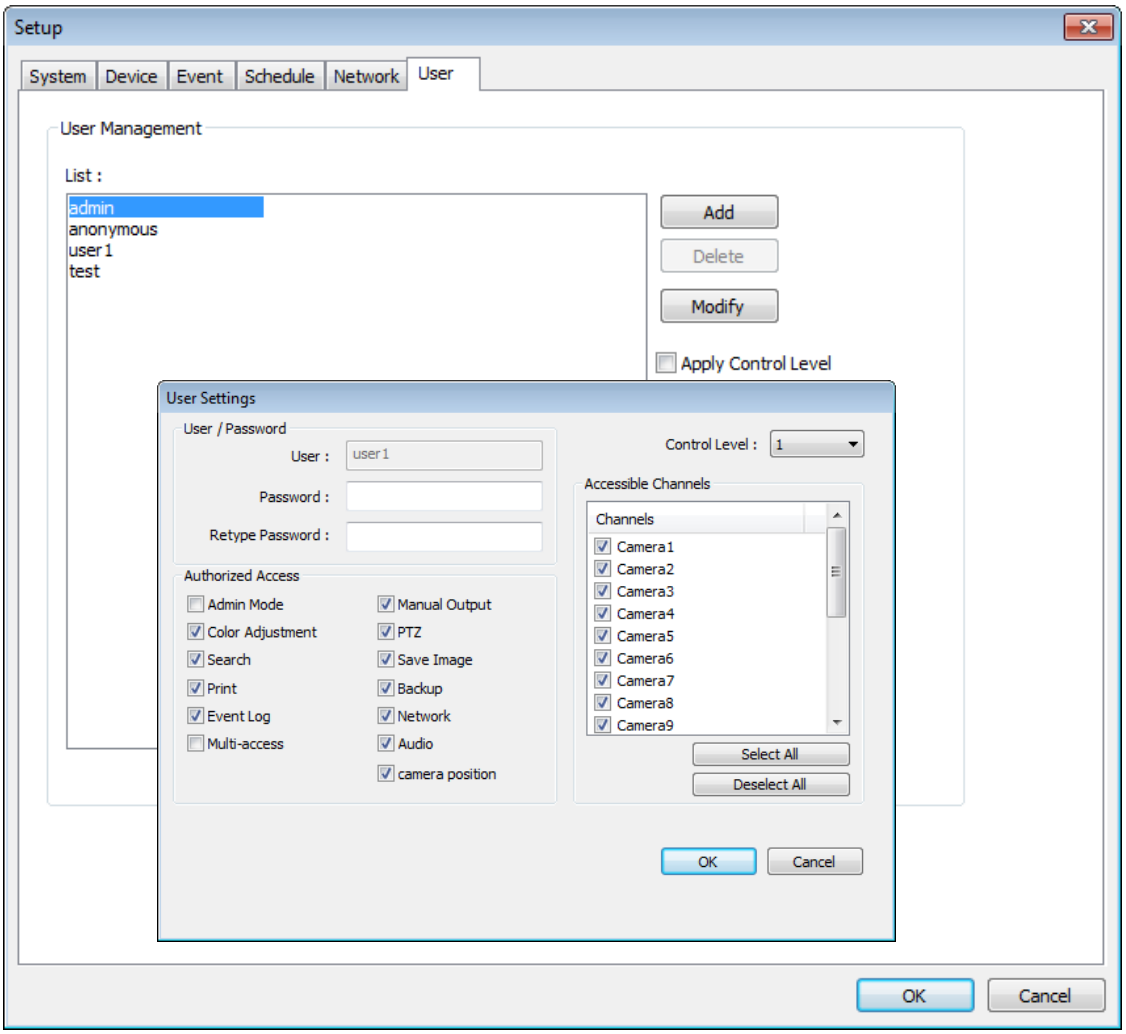
Clicking “IP Address Setting” will open a window for Network Connections as below.



Click right mouse and select Properties for IP setup for DVR’s network functions.

(6) User

Users can be added, deleted or modified with different authorized access and control levels.
There are no limits in the number of users created.



Authorized Access: If it checked, functions will be allowed to access remotely.
Accessible Channels: If it checked, channels will be allowed to view remotely.
Control Level: The lowest number will be allowed to have the first priority to set up, control, etc remotely.
Admin Mode: A user who can go into the setup and program (given the same authorization as “Admin”).
Only one user with “Admin Mode” can log in remotely.
Manual Output: If it checked, user can use TV out by right click mouse menu.
Network: If it checked, remote access authorization will be given to relevant user.
Multi-access: If checked, multi-users with the same user name can log in remotely at the same time.
Minimize: An authority that can minimize S/W.
Camera position: authorized user can do relocate camera screen position.

CHAPTER 4
View Log Application(Status)

Event Log

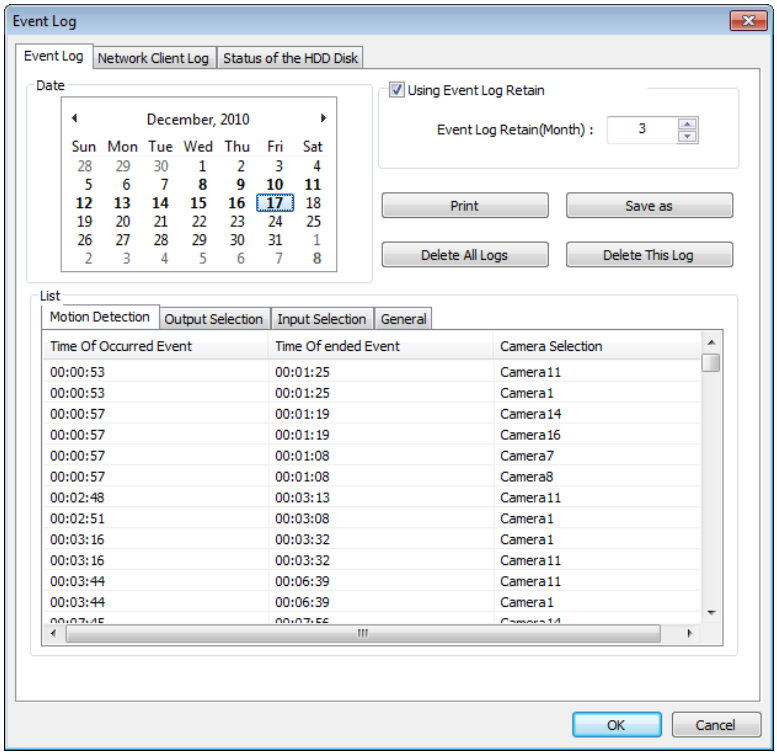
1. Screen Features

Recording Camera: It shows recording status.
Sensor Detect: It shows sensor detection status.
Motion Detect: It shows motion detection status.
Alarm: It shows alarm activation status.
HDD Capacity: It shows HDD capacity used for recording.
Event Log: It shows events occurred.

(1) Event Log

Event search is classified by motion detection, output, input and general.
Event occurred time and ended time by camera are displayed simply on the table.
Printing, saving of saved event list and managing the list are available in the 'Event Search' menu. Checking access network user and its time is available. It is also possible to check HDD health.

● Motion Detection



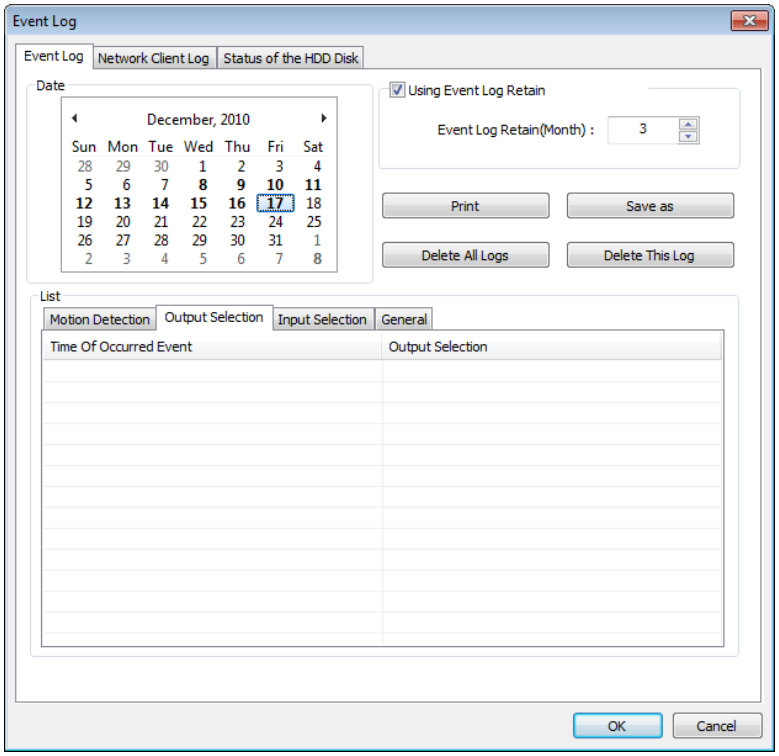
Using Event Log Retain: Event log can be saved into DVR automatically from 1 to 12 months and its default setting is 3 months. It is to avoid overloading of event log.
Example: If it sets 3 months and it is 20th of August today. It deletes data before 20th of May.

Date: All dates with events will be marked in bold numbers.
List: All events for a certain selected date will be shown.
Delete All Logs: If clicked, all the previous records will be deleted.
Delete This Log: If clicked, only the events for a certain selected date will be deleted.
Print: Print the event log of a selected date.
Save as: Save an event log of selected date with text file.

Motion Detection: Occurred and ended time of motion detection event is displayed on the table prominently with camera info.

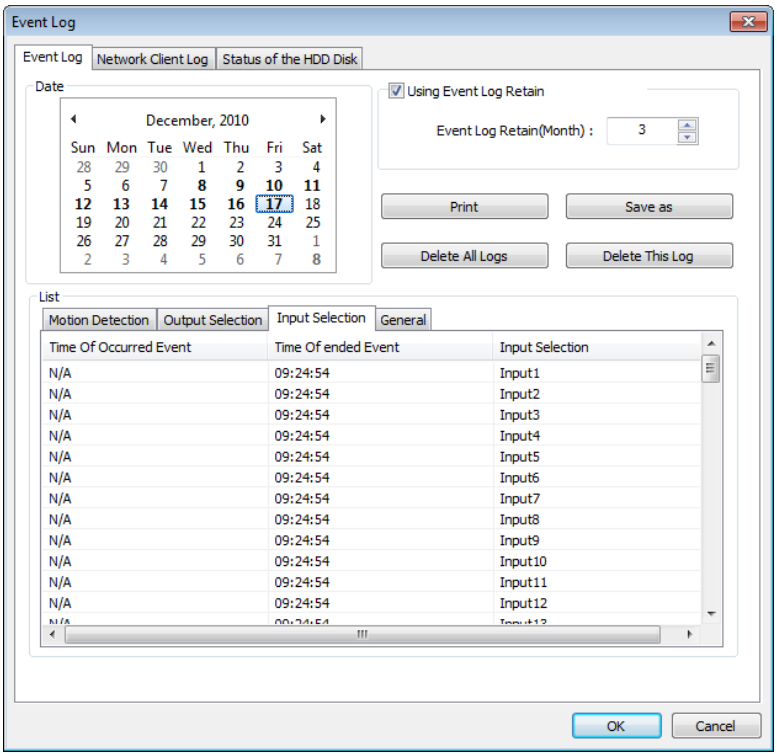
Caution
1. Remote client software and server version needs to be the same as 5.5.4.0.
There is a problem in computability with server if client version is not 5.5.4.0. Upgrading client software to 5.5.4.0 is highly recommended.
2. Log saved separately to manage "Event Log" efficiently. Viewer program is required to maintain "Event Log".

● Output Selection



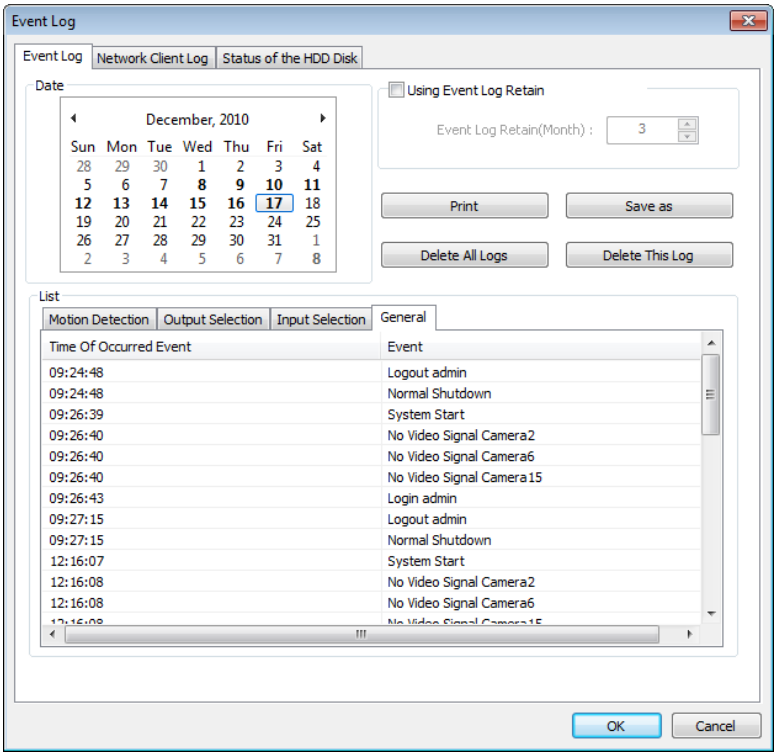
Output Selection: Occurred time of event from output device is displayed on the table prominently with output device info.

● Input Selection



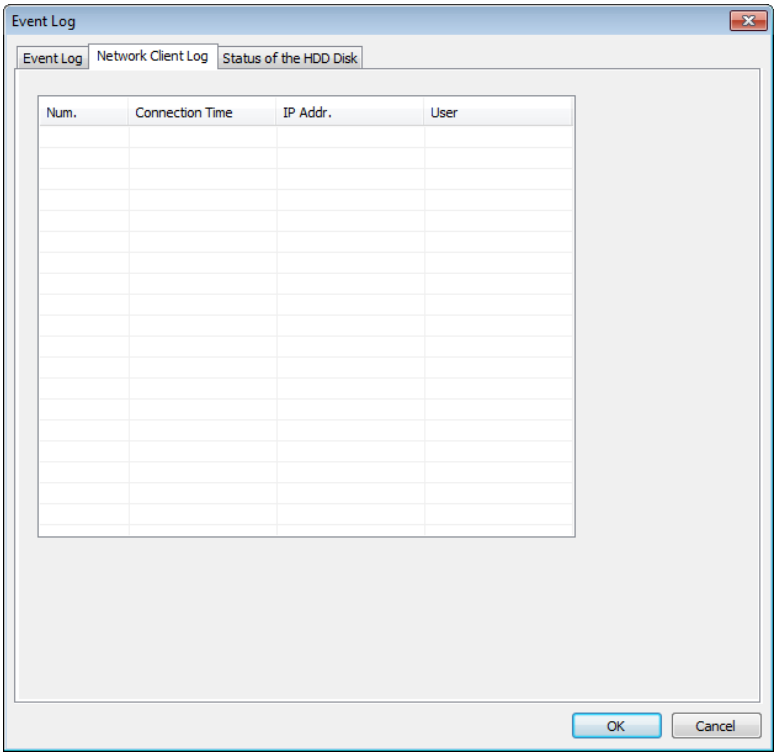
Input Selection: Occurred time of event from input device is displayed on the table prominently with input device info.

- **General**



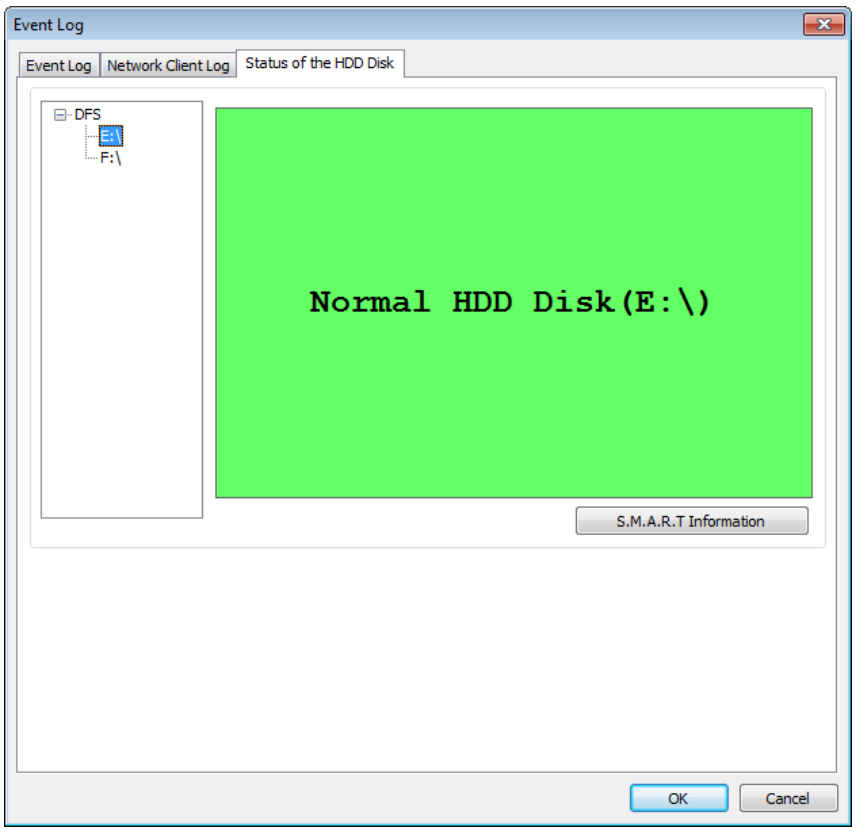
General: Occurred time of events from all connected devices is displayed on the table prominently with each device info.

(2) Network Client Log

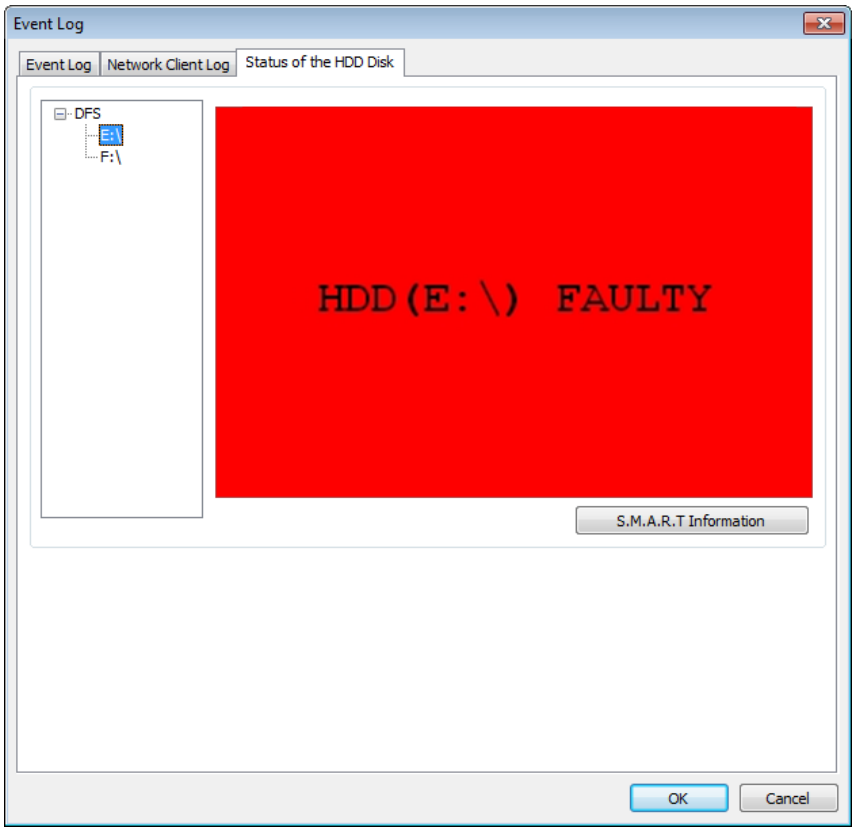


Network Client Log: Remote login records will be also kept on DVR server.
Checking accessed network user, connected time and IP address are available.

(3) Status of the HDD



Every 5 hour DVR checks the status of HDD and shows its condition with different colors.
Green: okay Yellow: Faulty is going on. Red: Completely fault.



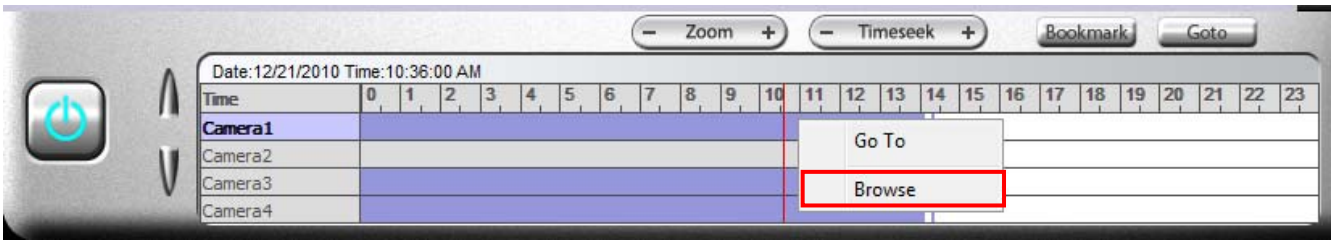
If HDD is completely fault, POPUP menu as above will be shown.
It rests till the system shuts down, and it shuts down below message will be appeared.

CHAPTER 5
Playback Application (Search)

1. Search Features 1

Calendar: All dates with recorded data will be marked in bold numbers.
Sharpness: Buttons to adjust sharpness of image
Zoom: Buttons to zoom in/out
Brightness: buttons to adjust brightness
Contrast: buttons to adjust contrast
Default: Default for Zoom/Brightness/Contrast

2.Search Features 2



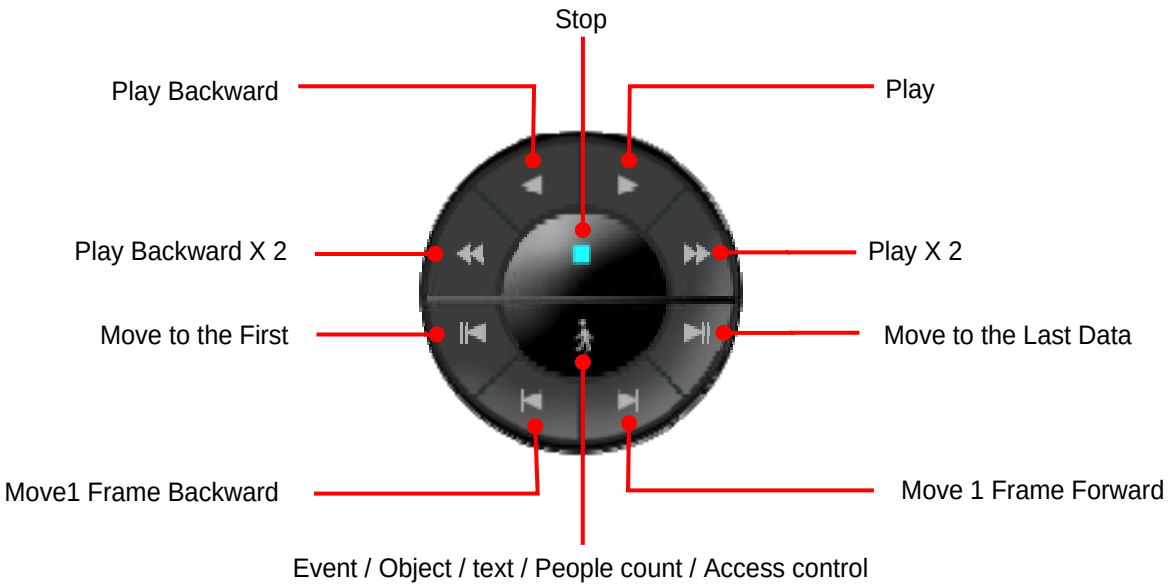
Clicking right mouse on Time bar for Browse… and select a folder containing backup data

(1) Playback

For playback, simply select date, screen mode (1, 4, 7, 9, 13, 16, etc.), time by one click on the time bar and click the play button.

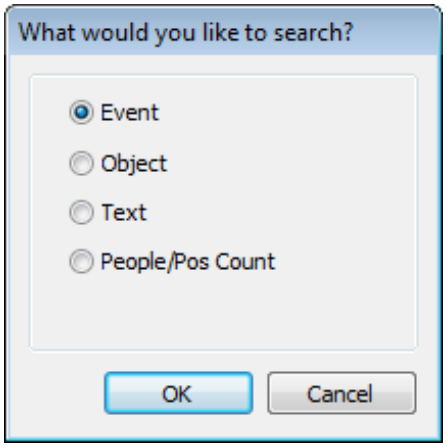
What different colors mean on the time bar:

1. **Blue:** Recorded data by sensor & motion detection
2. **Purple:** Recorded data by 24-hour-recording
3. **White:** No recorded data in all cameras
4. **Gray:** No recorded data for some cameras
5. **Green:** Blue + audio
6. **Light Green:** Purple + audio
7. **Dark Red:** Purple + recorded text data (POS)
8. **Orange:** Even- recorded data with recorded text data.
9. **Dark Yellow:** Event-recorded data + recorded text data + audio
10. **Yellow:** Purple + recorded text data + audio

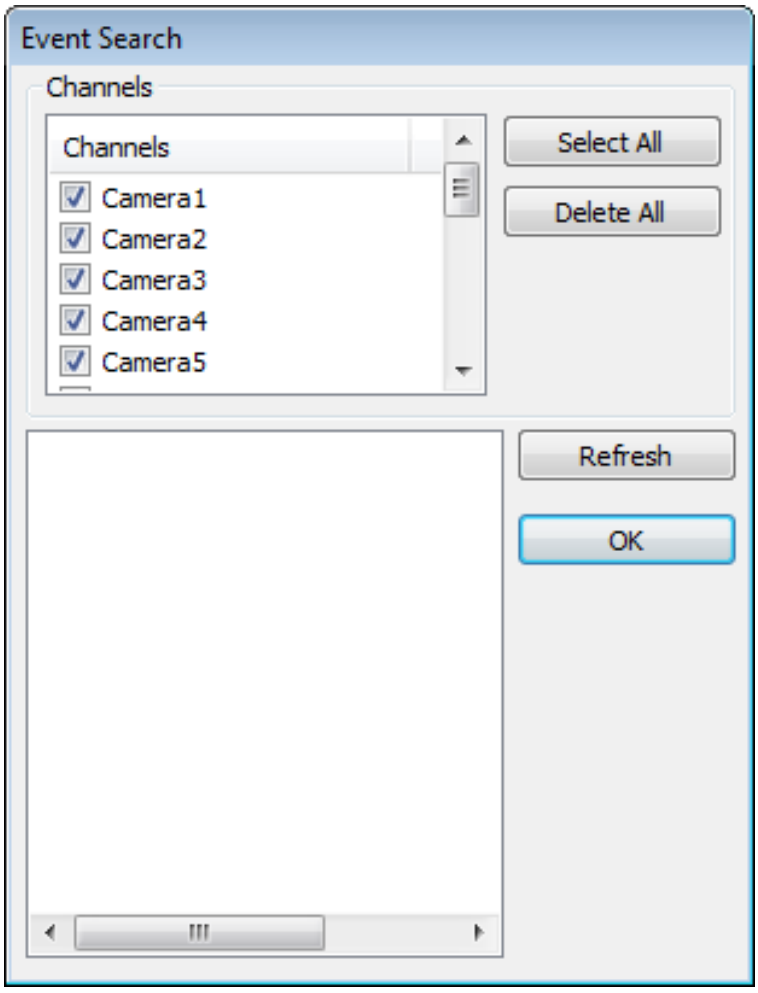


(2) Event / Object / Text / People Count / Access Control Search

[Event Search]

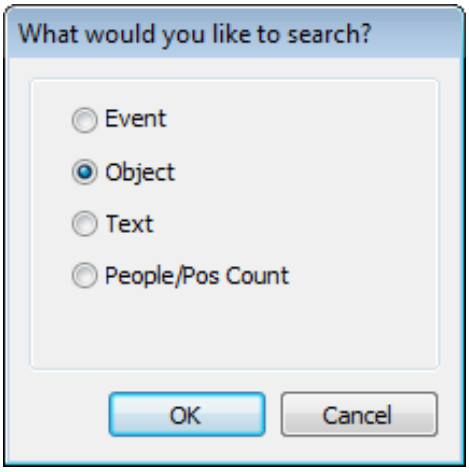


Click the Event / Object / Text / People/POS Count Search button and select “Event”.

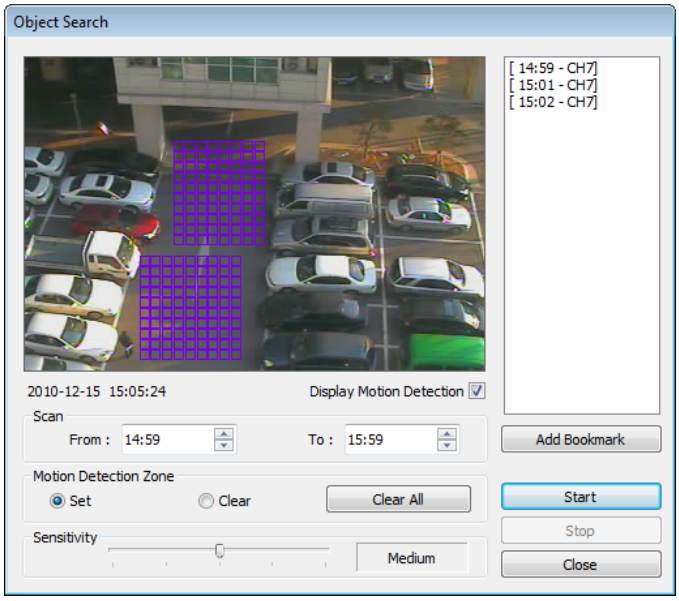


Select channels for Event Search.
Select one event from the event list and click “OK”, and the selected event will be displayed.
Click “Refresh” to update the list.

[Object Search]

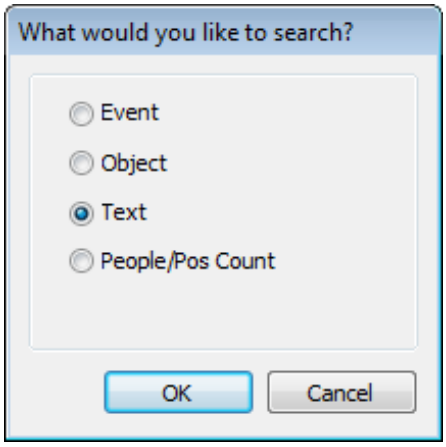


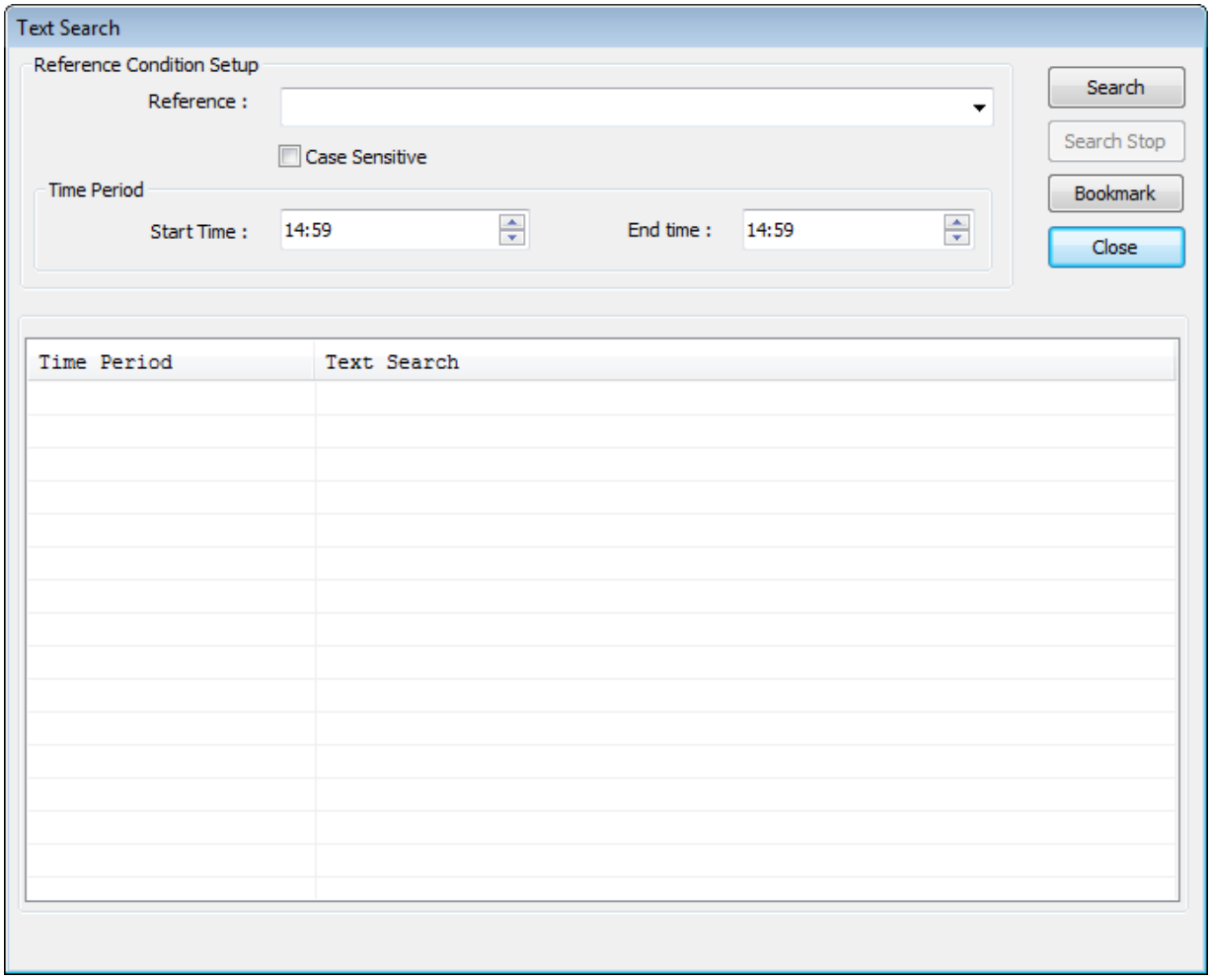
Object Search is only to search certain selected objects for a certain period of time.
Scan: Set the time period for object search
Motion Detection Zone: Select “Set” and mark areas for object search by dragging mouse.
“Clear” is used to erase certain areas inside motion detection zones.
Sensitivity: Set motion detection sensitivity level.
Clear All: Click on it to clear all the motion detection zones set.



[Text Search]

It is to search POS text data with image according to selected time period and item.



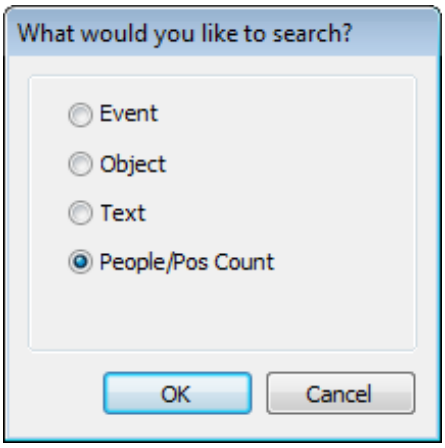


Put in an item (Reference), select time period and click on “Search”, and a list with transactions will be displayed.

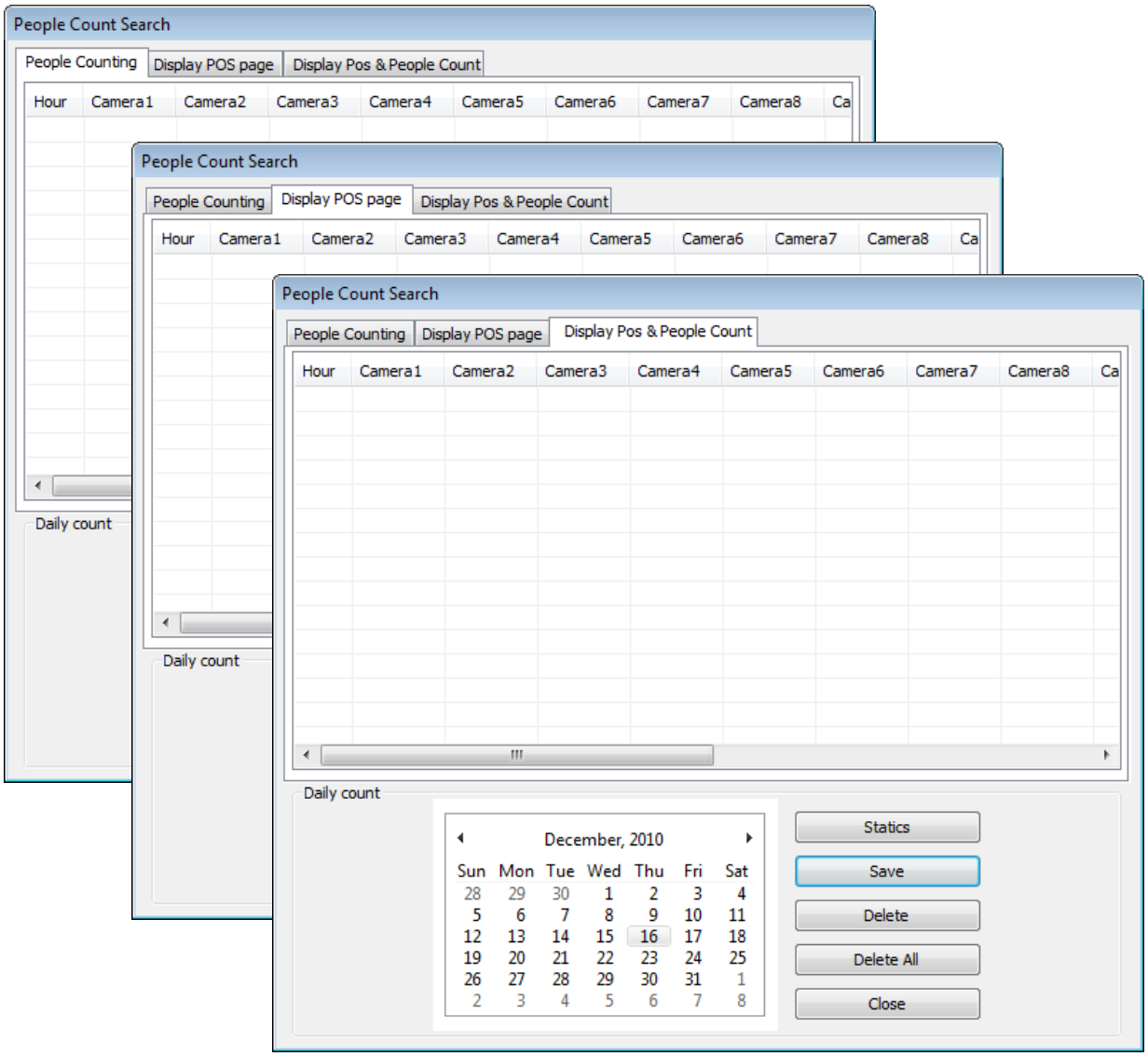
- Searched words will be retained in the combo ox in down-list format so the data can be easily shown in next search.

[People / POS Count Search]

It is to search people/POS count statistics according to selected time period & camera.
Through this function, the results of people count and POS transaction can be analyzed by the hour and cameras.



Select date, camera & time, and statistics will be shown as below.
Statistics are distinguished as People Counting, POS Counting, and POS/People Counting.
Statistics can also be saved as text file.



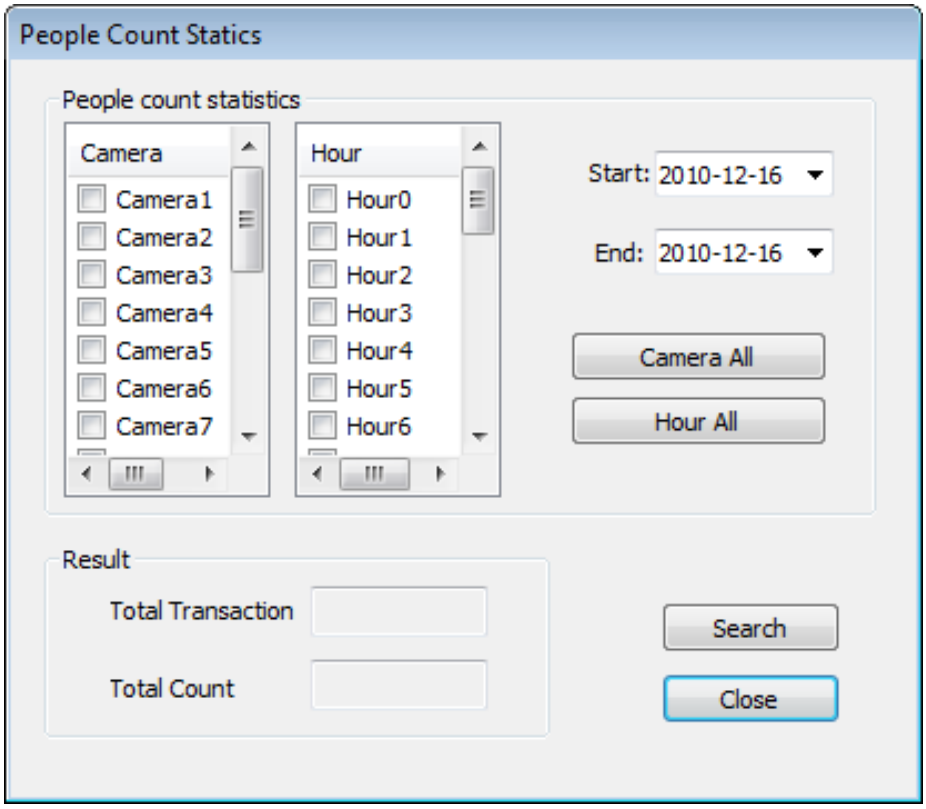
People Count Search

1. People Counting:
It shows counted people number in certain zones by Hour and Cameras on the table.

2. POS Counting:
Counting It shows received POS data number in DVR by Hour and Cameras on the table.

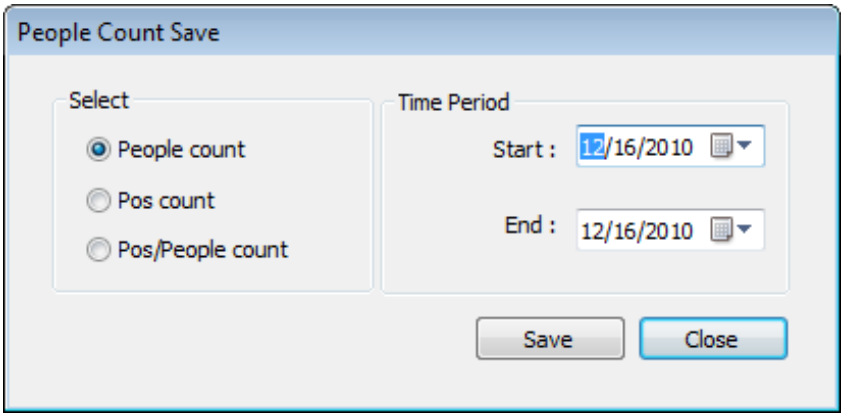
3. POS/People Counting:
It shows both counted People and received POS data number on the table.

4. Delete/Delete All:
To erase data in statistics



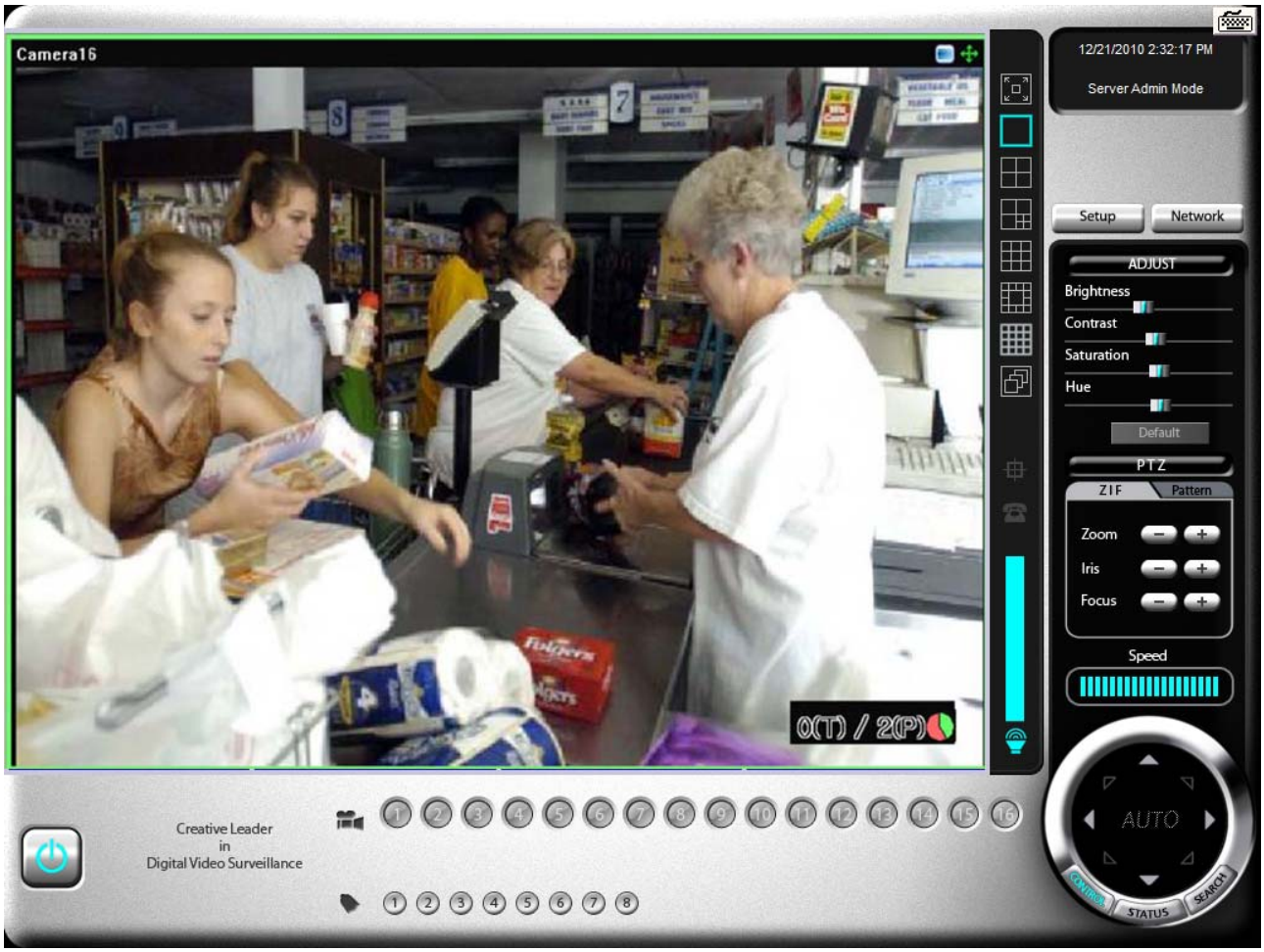
Statistics

1. Camera/Hour: Select camera and hour wish to search
2. Start/End: Select date wish to search
3. Camera All/Hour All: Click it to select all cameras and hour.
4. Total Transaction: Results after searching transaction count in total
5. Total Count: Results after searching people count in total
6. Search: Click it to start search
7. Close: Click it to close the menu.



Save

1. Select: Select menu wish to save.
2. Time Period: Select date wish to save.



How to read data and graph

1. Counted number of (T)ransaction/ Counted number of (P)eople count
2.

   Red Color: Rate of people count

   Green Color: Rate of Transaction

   The Pie Graph will show at a glance how many transactions have been performed, compared to the number of people counted.

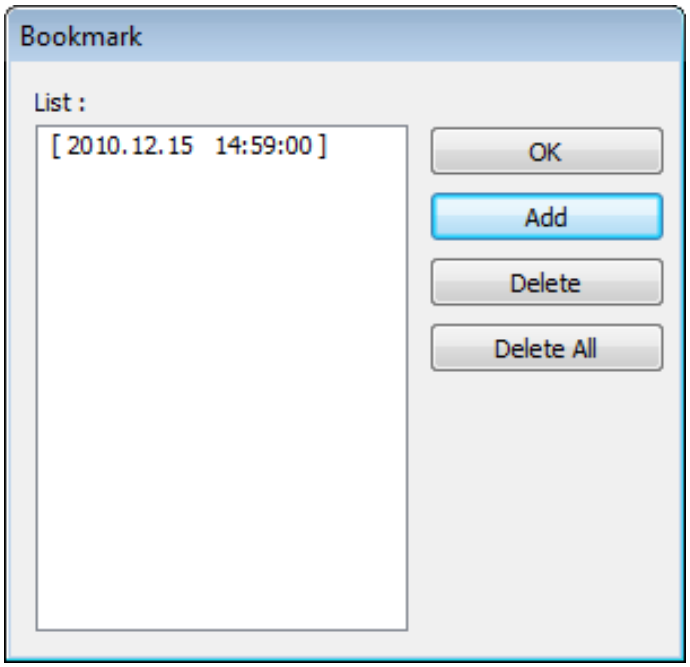
(3) Monitoring & Searching

It is a feature that enables user to view live video while searching recorded data.

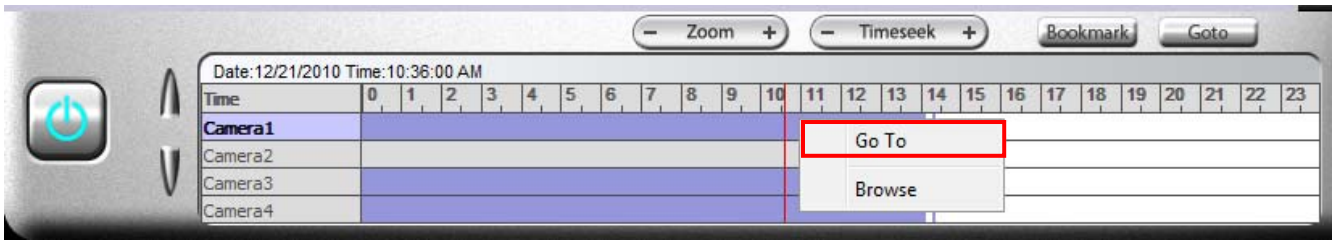
Click the right mouse and select “Monitoring On” to view live video. Click the right mouse again and select “Monitoring Off” to go back to “Search Mode”.

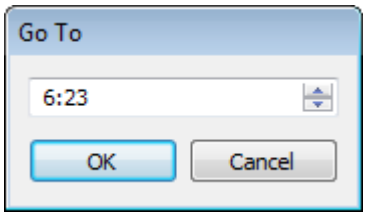
(4) Bookmark & Go To

Click Bookmart Icon to open Bookmark window.



Right click on the time table and select “Go To” menu to go to desired time to search.

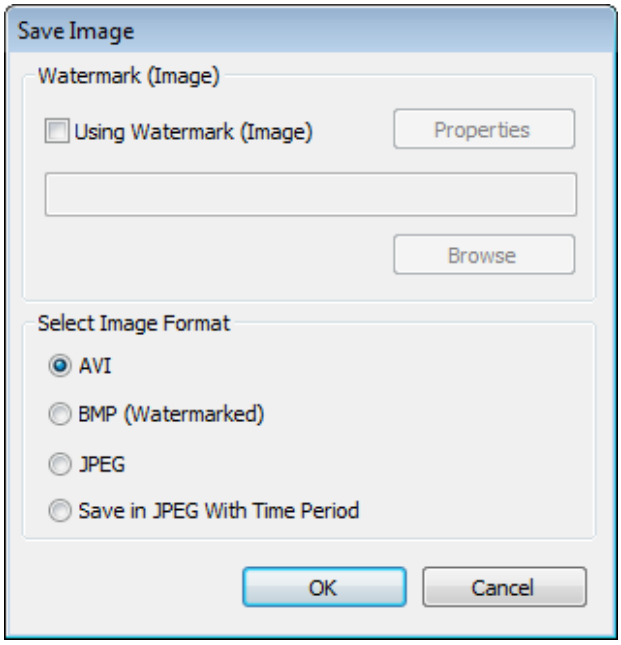




Go To:
Select desired time to search and click “OK”.

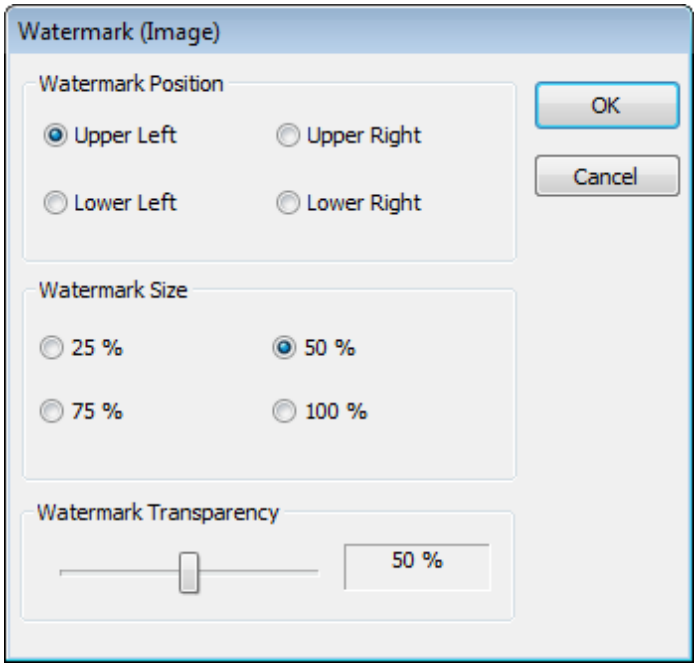
(5) Save

: Click Save icon to save data as AVI / BMP / JPEG format.



Watermark(Image)
Using Watermark (Image): To attach a certain logo or special picture on AVI file.

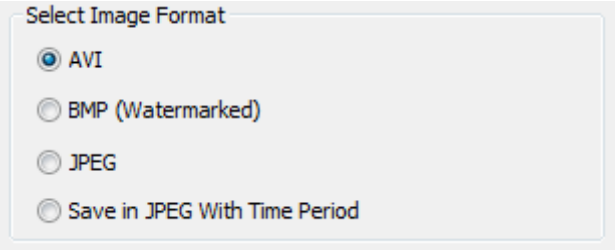
AVI: For saving motion pictures and audio
BMP: For saving images. Watermarked images can be saved.
JPEG: For saving regular still images. Quality is not as good as BMP but less HDD is used.
Save in JPEG with Time Period: For scheduled save in JPEG



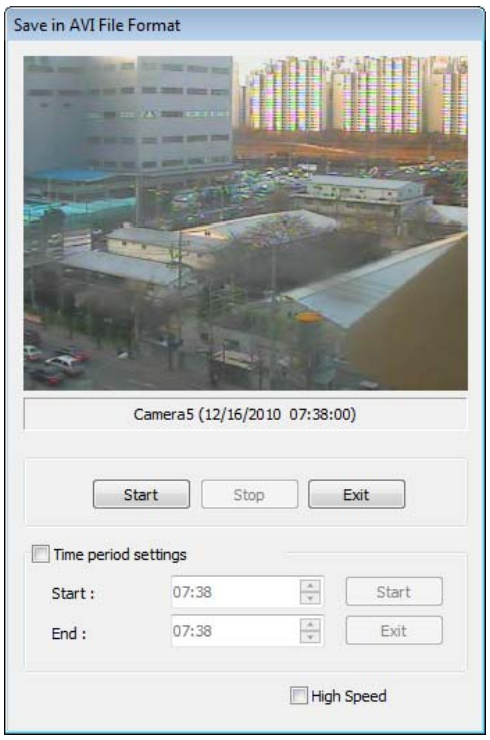
- Watermark Setting

Select each for desirable watermark setting.

[Save in AVI Format]



Click on “Browse” to find watermark image or logo.



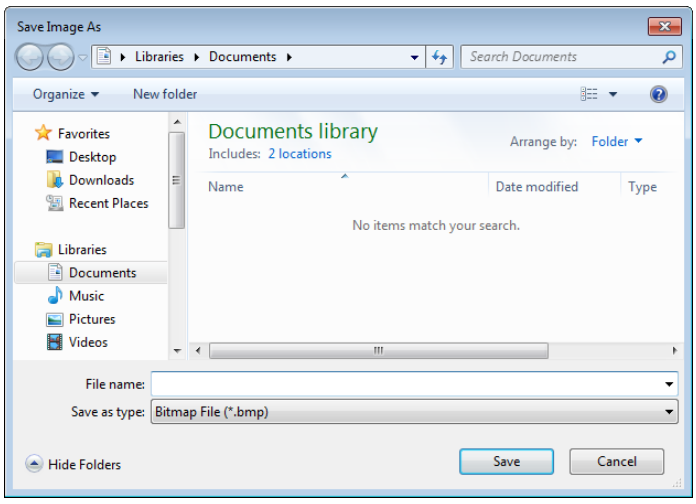
Click “Start” to start saving and “Stop” to stop saving.

Mute:
Saving video only (no audio)

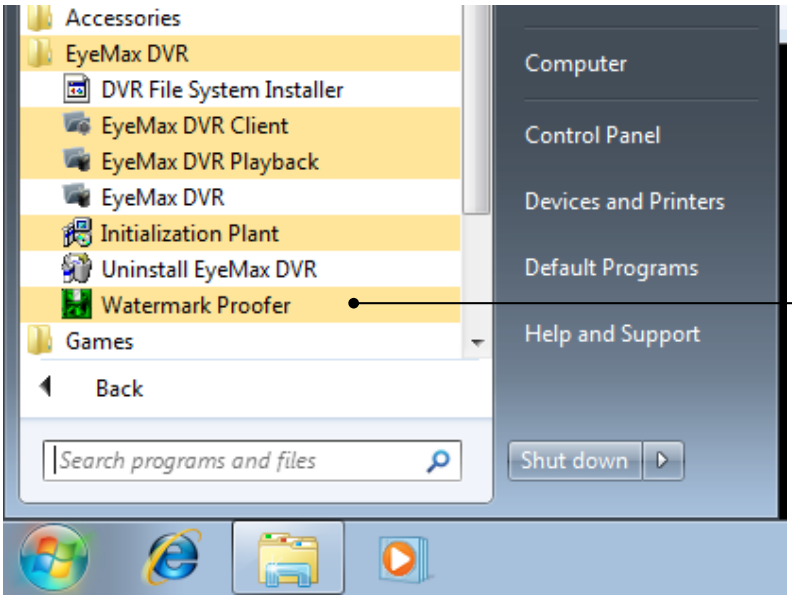
High Speed:
Saving in high speed
Click time period settings and put the time period that you want to save.

[Save in BMP Format]

[Save in BMP Format]	⇨	Click “Start” and select “BMP” as you save images. Saved images can be checked using “Watermark Proofer”.



[Watermark Proofer]



Execute “Watermark Proofer” and check if certain saved images are forged or not.

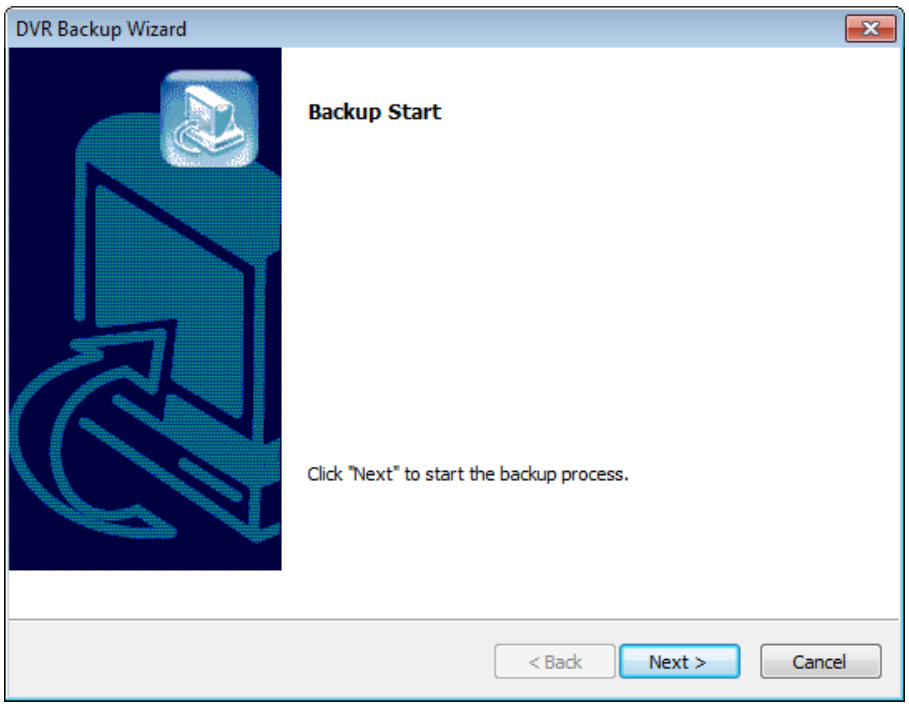
Click “Load” to browse file to check.

[Save in JPEG Format] → Click “Start” and select “JPEG” as you save images.

[Save in JPEG with Time Period] → Select time period and select channels to be saved in JPEG.

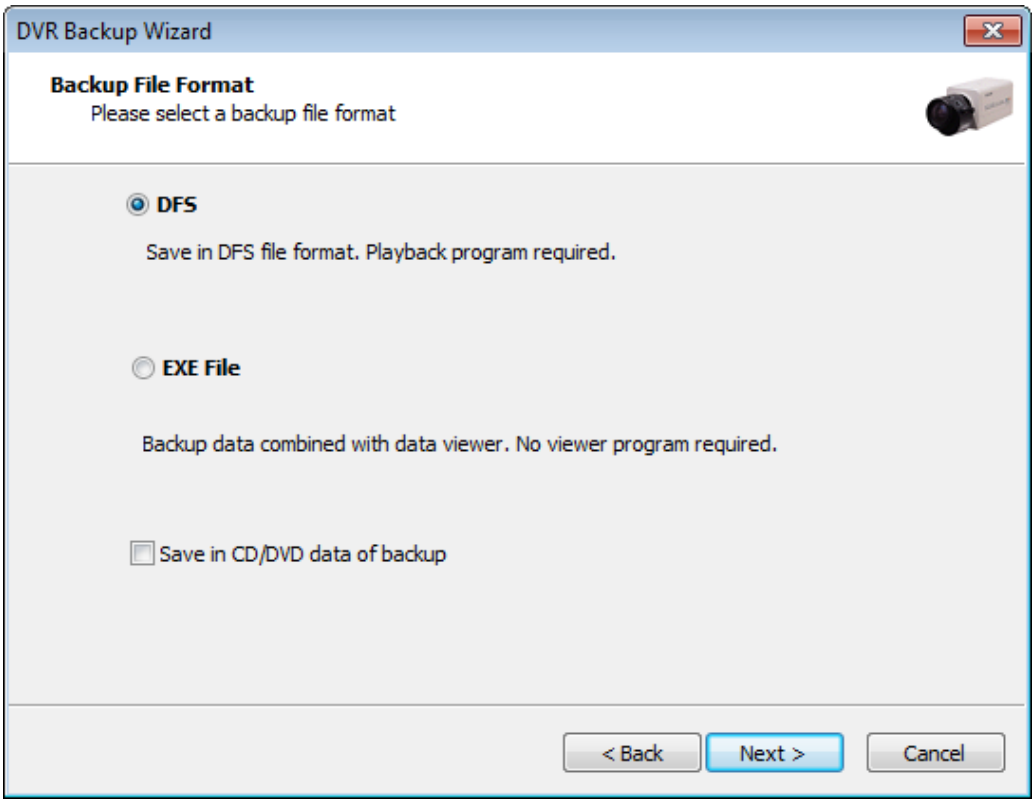
(6) Backup

The recorded data can be copied from the hard disk to external storage devices, such as CD-R, DVD.



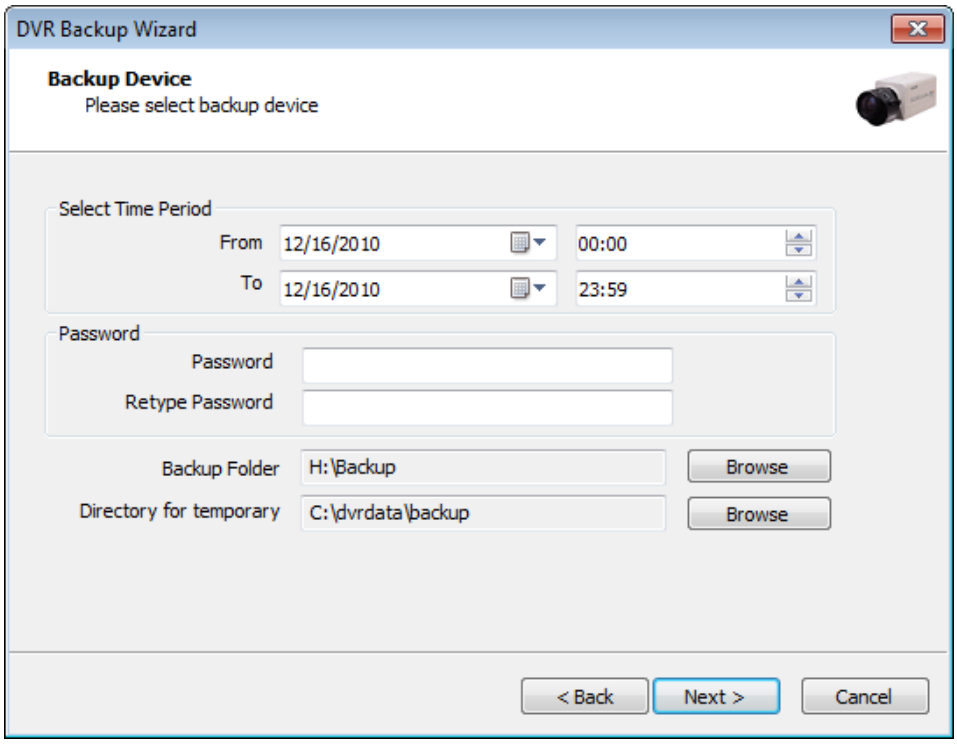
Back up recorded data using various backup devices.

- **DFS Backup**

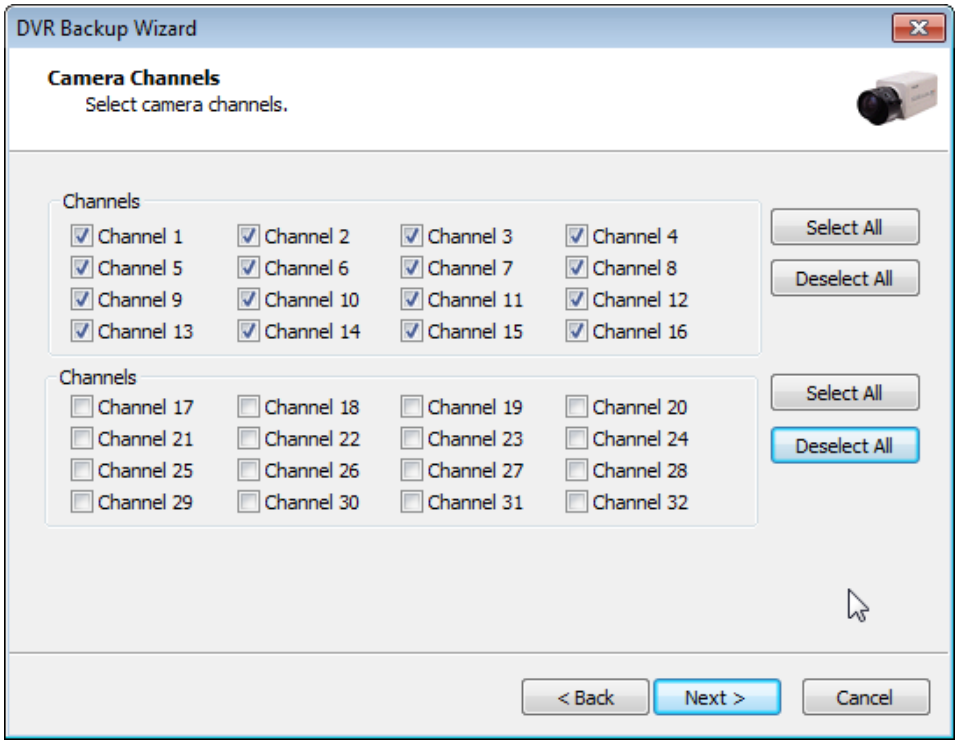

DVR Backup Wizard
Backup File Format
Please select a backup file format
DFS
Save in DFS file format. Playback program required.
EXE File
Backup data combined with data viewer. No viewer program required.
Save in CD/DVD data of backup
< Back
Next >
Cancel

DFS: Save in DFS file format.

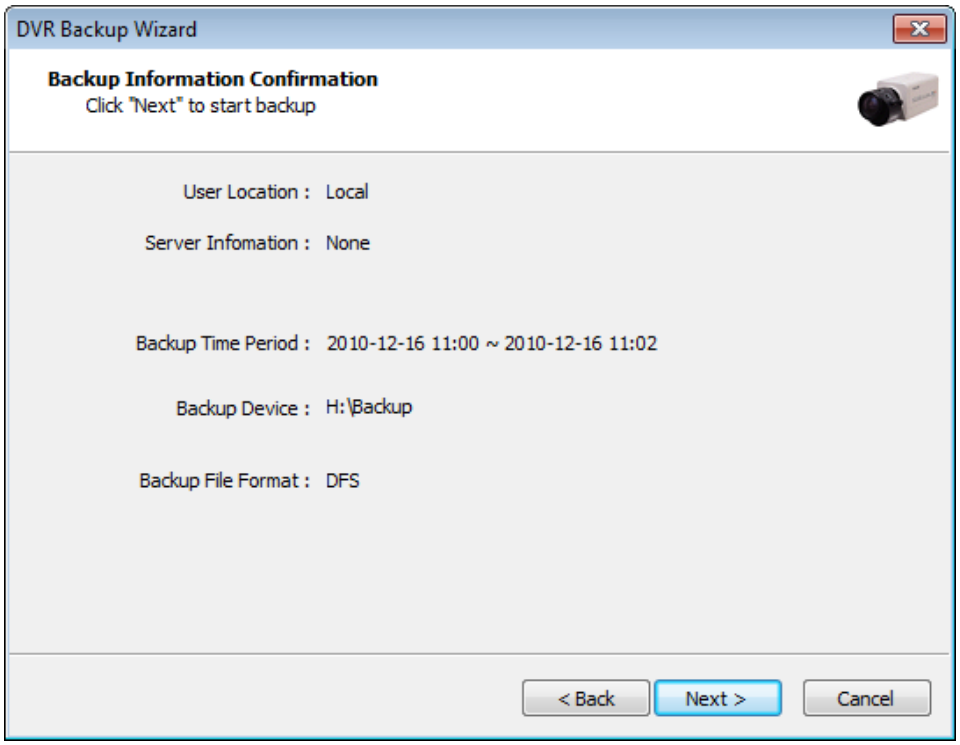
Click “Next” to continue backup process.



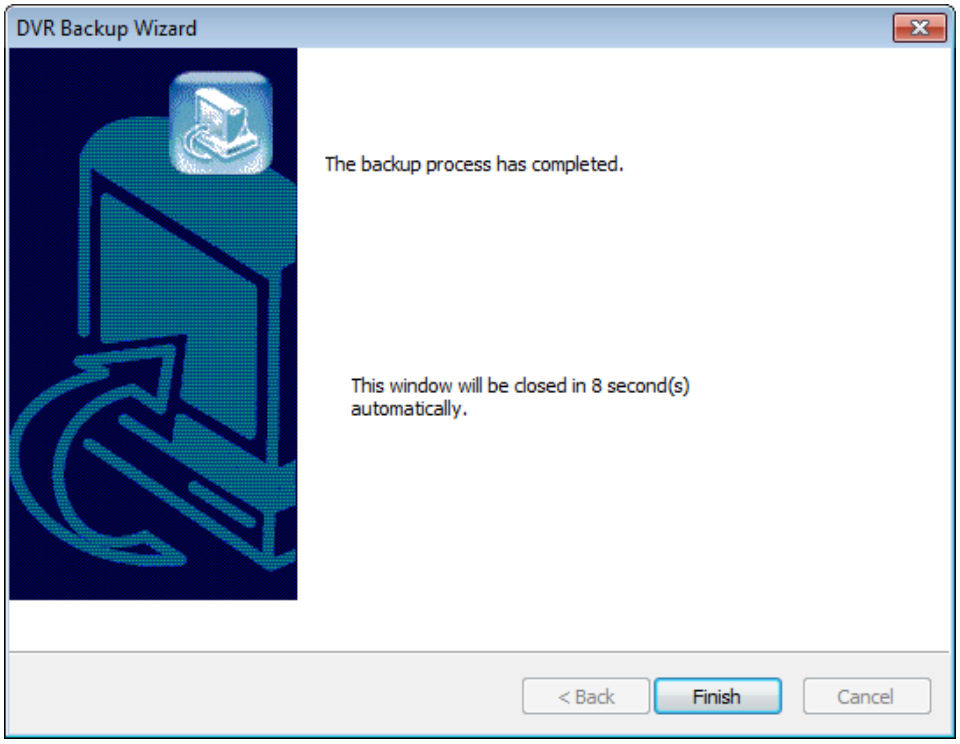
Select Time Period : Specify time period for backup. The minimum period for backup is 1 minute.
If password is set, viewing backup data will be possible only when it is typed in.
Backup Folder: Click the “Browse” button, select a drive to back up and enter a desired folder name.



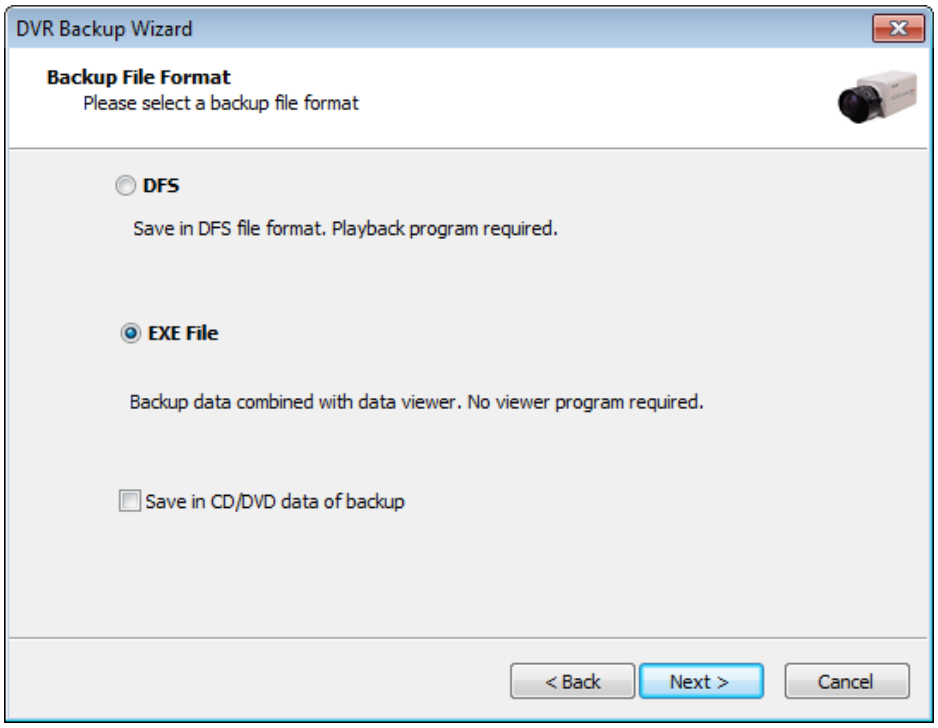
Select camera channels to backup.


DVR Backup Wizard
Backup Information Confirmation
Click "Next" to start backup
User Location : Local
Server Infomation : None
Backup Time Period : 2010-12-16 11:00 ~ 2010-12-16 11:02
Backup Device : H:\Backup
Backup File Format : DFS
< Back
Next >
Cancel

Confirm the Backup information and click “Next” button to continue.



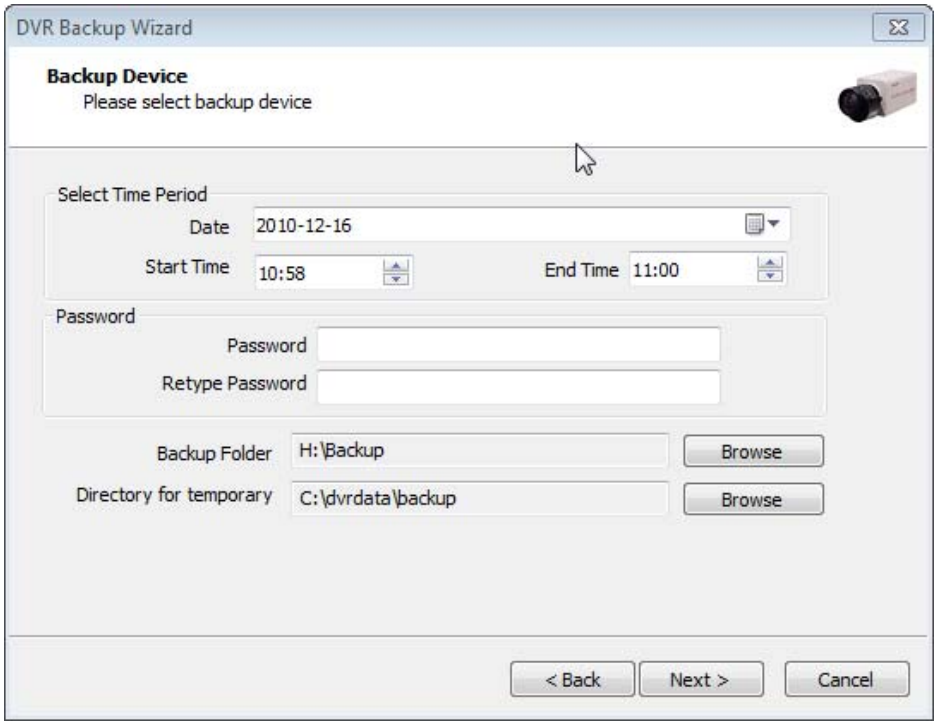
● EXE Backup


DVR Backup Wizard
Backup File Format
Please select a backup file format
DFS
Save in DFS file format. Playback program required.
EXE File
Backup data combined with data viewer. No viewer program required.
Save in CD/DVD data of backup
< Back
Next >
Cancel

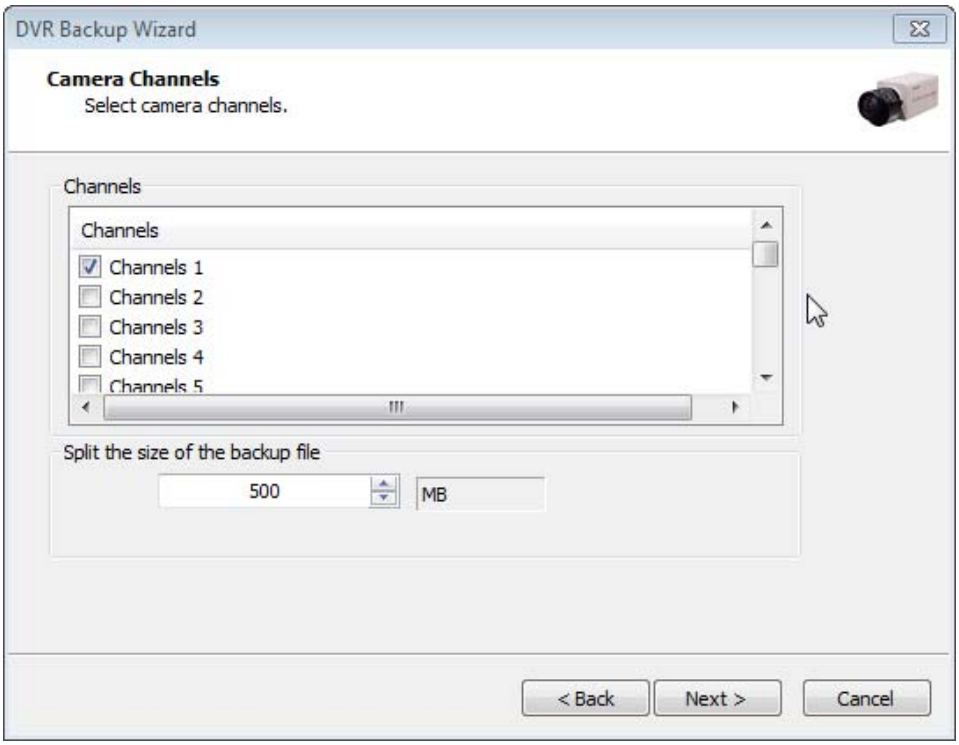
Any recorded data can be saved as ".exe" file. No viewer program is required to see saved data.

Note: 1. file size limited up to 1 GB.

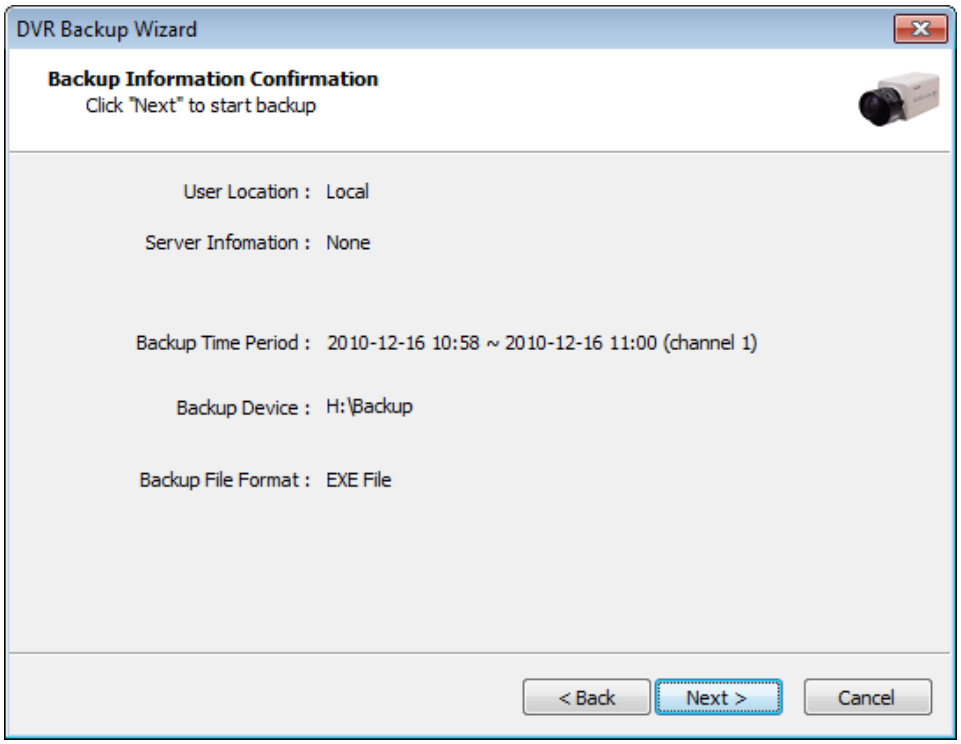
2. 1 channel backup only.



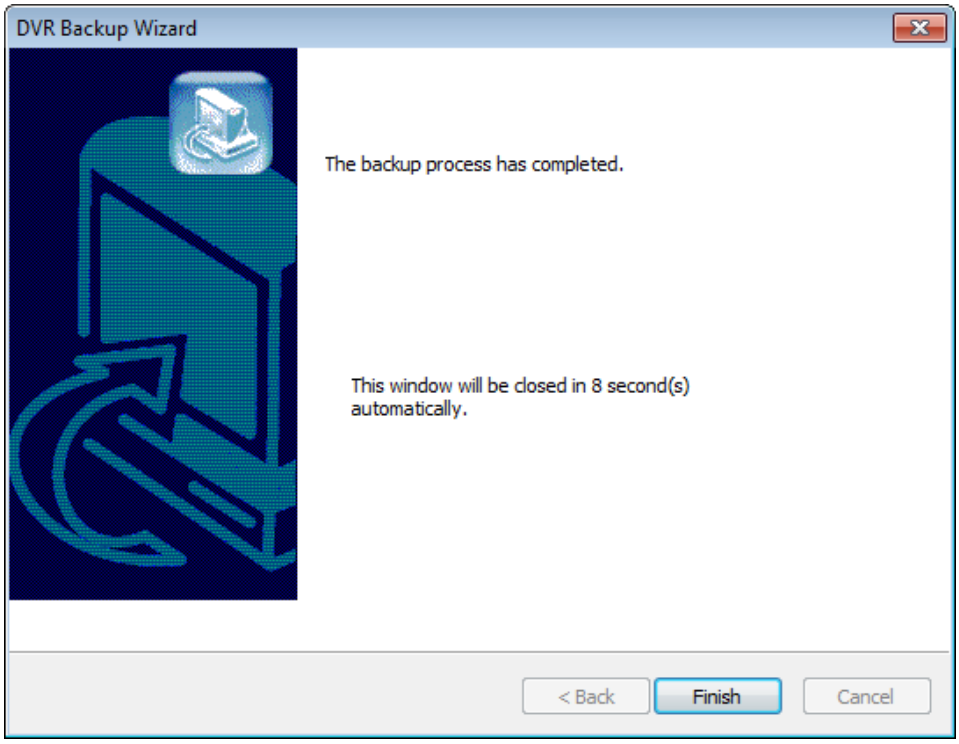
1. Select "EXE File".
2. Specify time period, password, drive, etc.



3. Select ONE channel to back up.
4. Specify file size up to 1GB. If it is larger than 1GB, multiple exe files will be created.

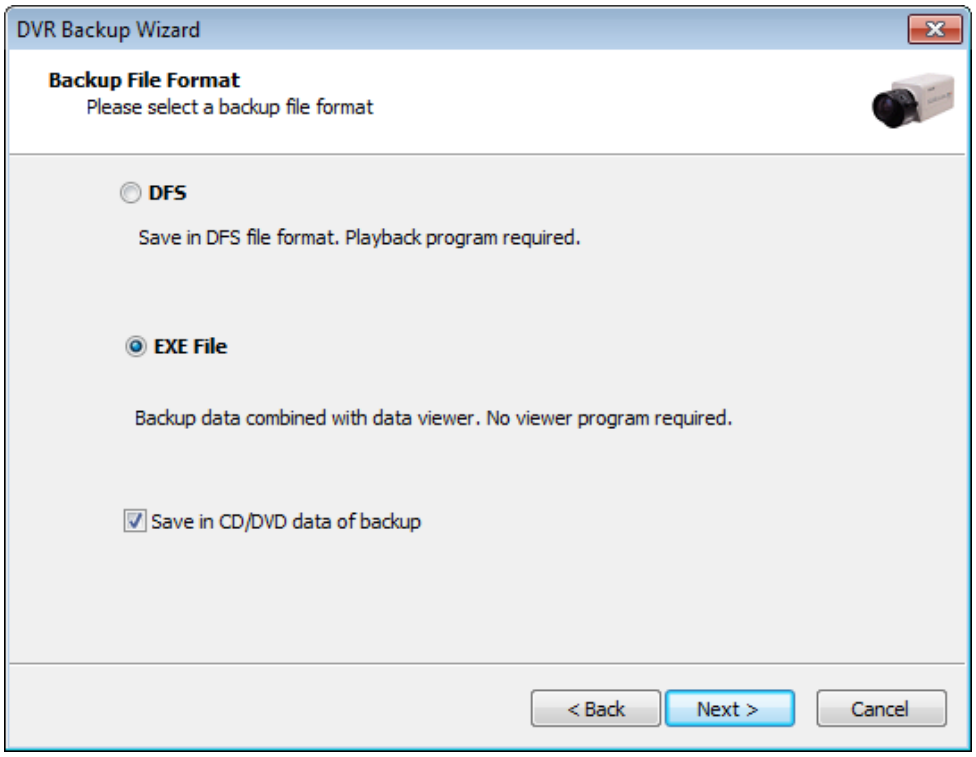

DVR Backup Wizard
Backup Information Confirmation
Click "Next" to start backup
User Location : Local
Server Infomation : None
Backup Time Period : 2010-12-16 10:58 ~ 2010-12-16 11:00 (channel 1)
Backup Device : H:\Backup
Backup File Format : EXE File
< Back
Next >
Cancel

5. Confirm the Backup information and click “Next” button to continue.



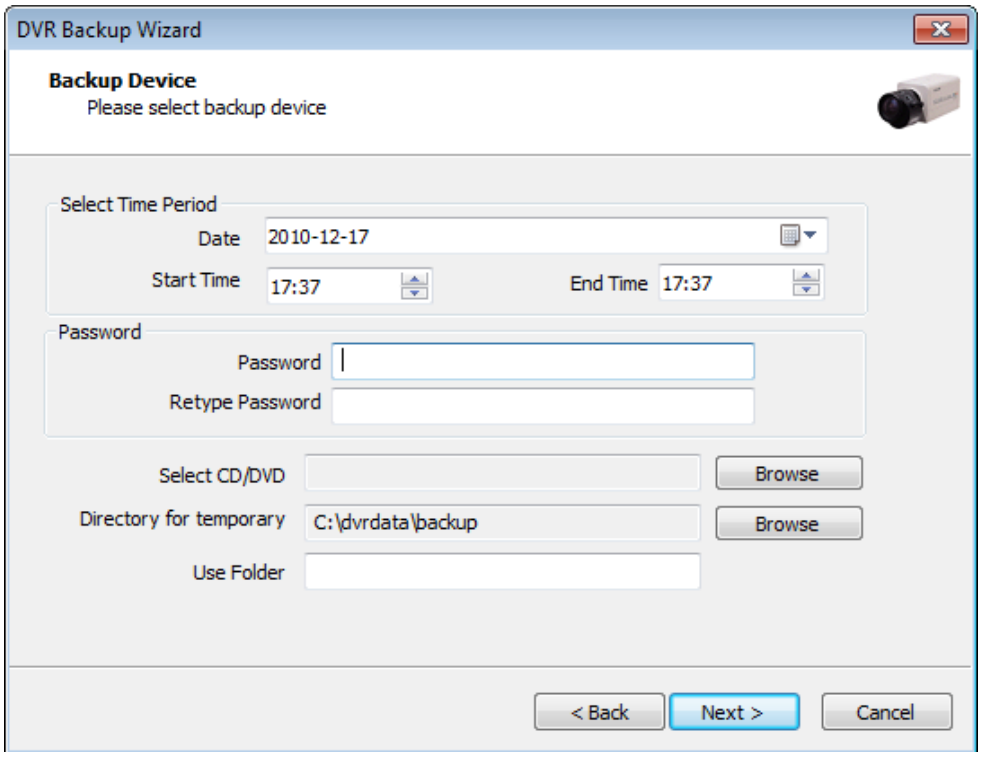
6. Double-click the exe file created to see data.

● EXE Backup with CD Recording


DVR Backup Wizard
Backup File Format
Please select a backup file format
DFS
Save in DFS file format. Playback program required.
EXE File
Backup data combined with data viewer. No viewer program required.
Save in CD/DVD data of backup
< Back
Next >
Cancel

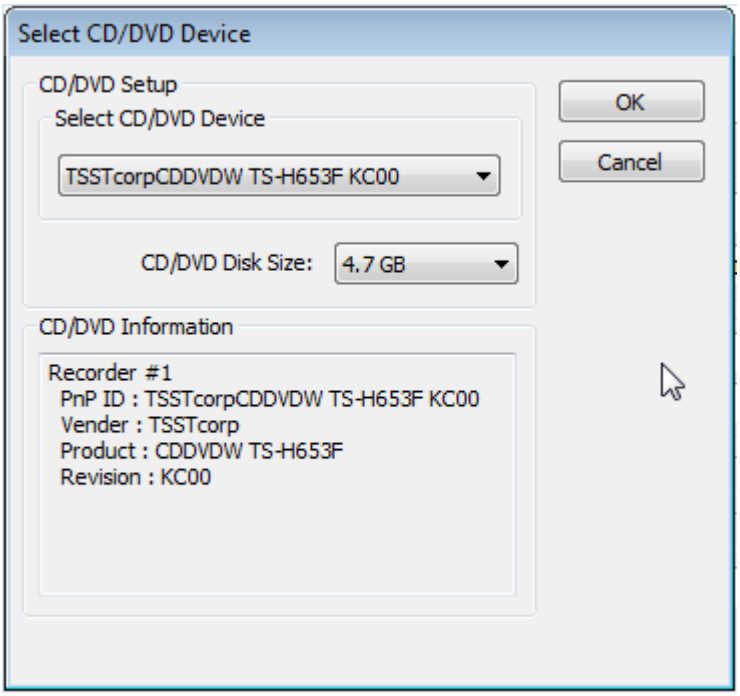
You can back up data directly in a CD without exiting the DVR Program.

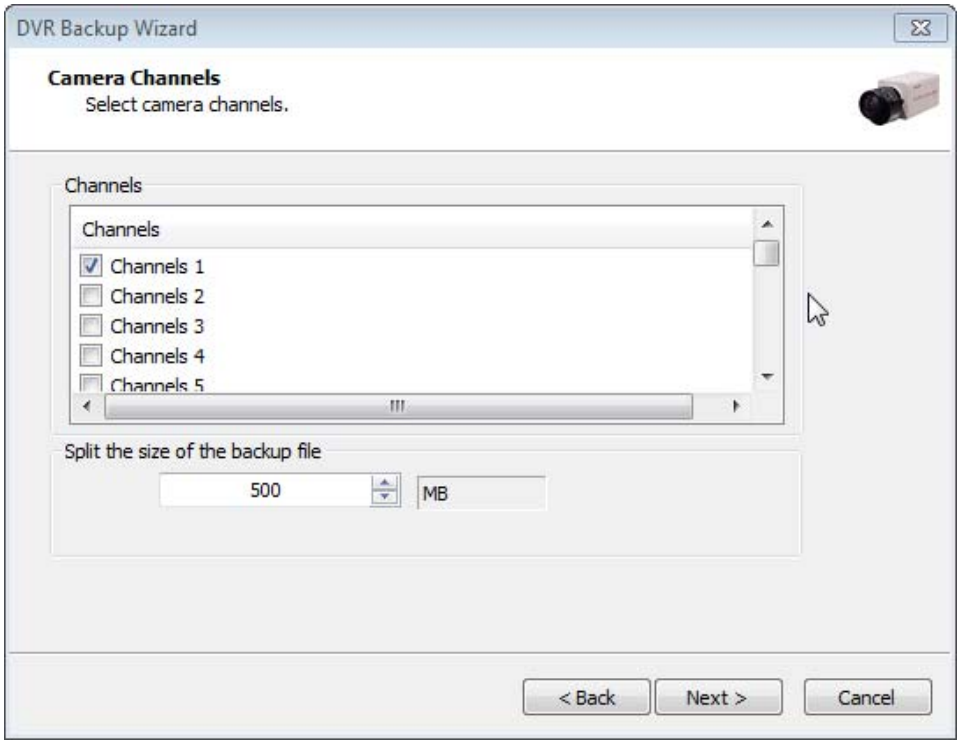
1. Tick the “Save in CD data of backup” box and click “Next”.



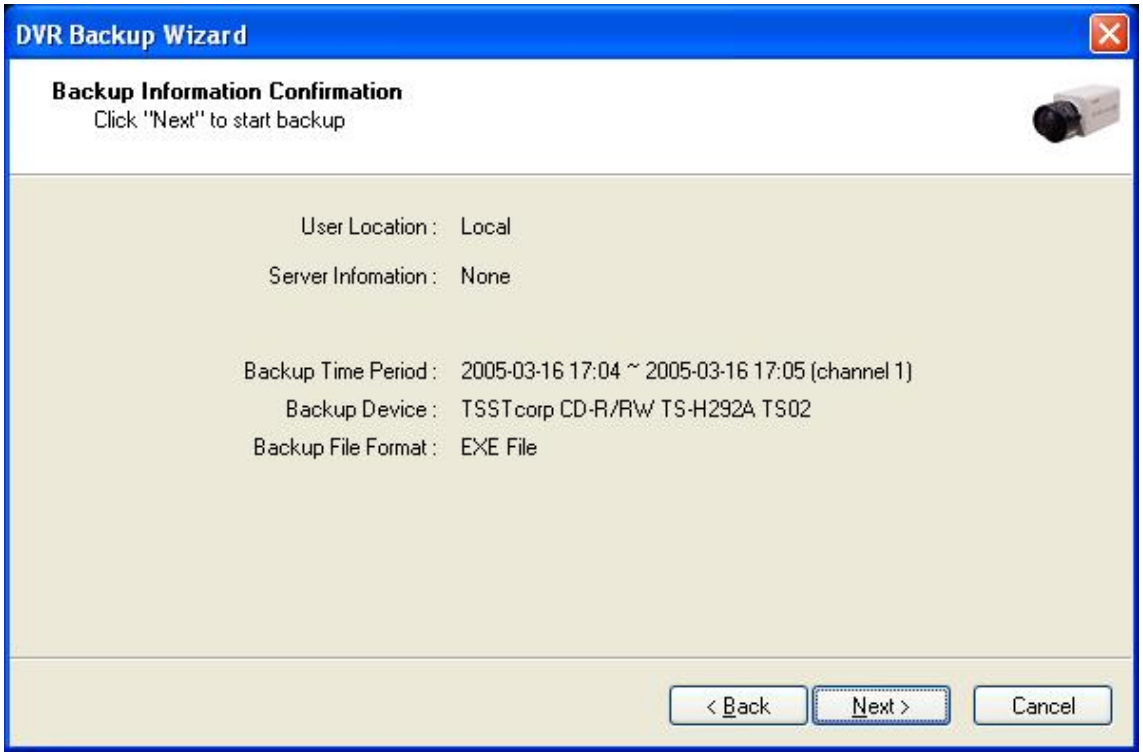
2. Select Time Period : Specify time period and password.
3. Select CD/DVD drive.
4. Create folder name if it should be used and click “Next”.

5. CD information will be shown as below.

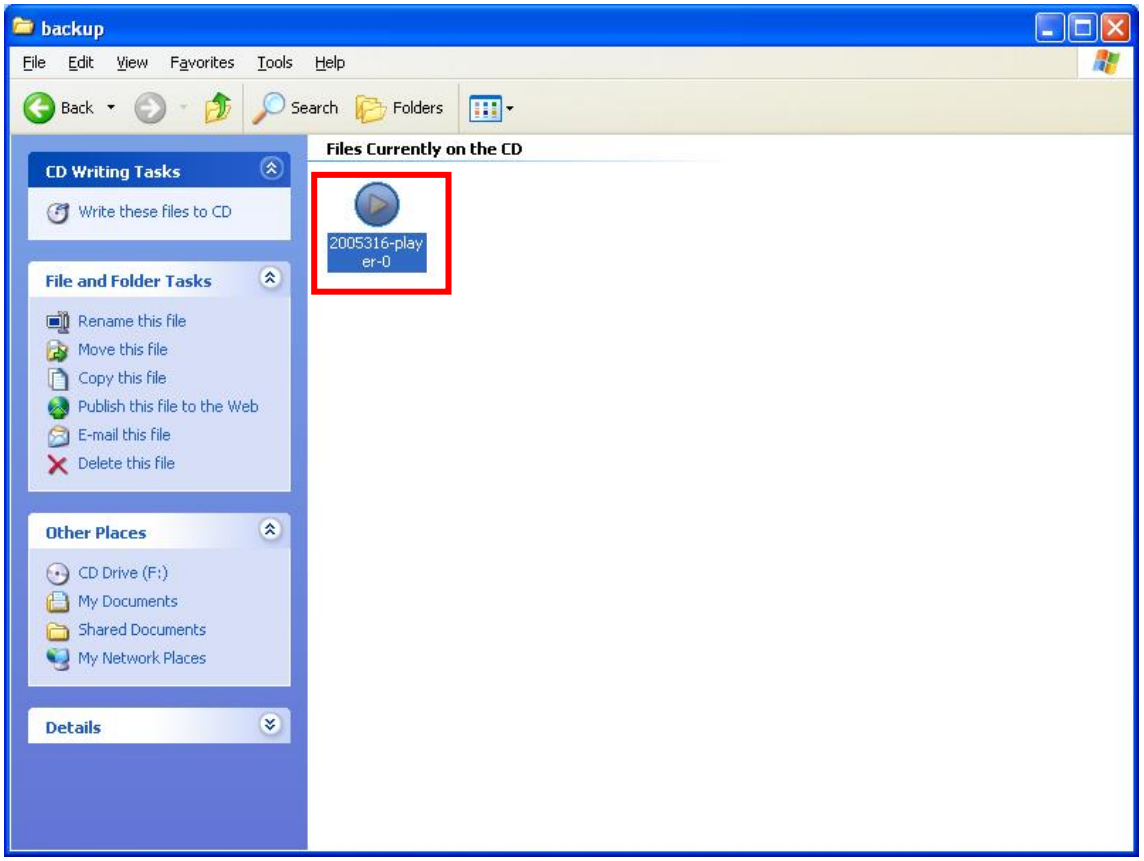




6. Select 1 channel to backup.
7. Identify the maximum file size indicated. An attempt to back up more than the size indicated will result in a failure.

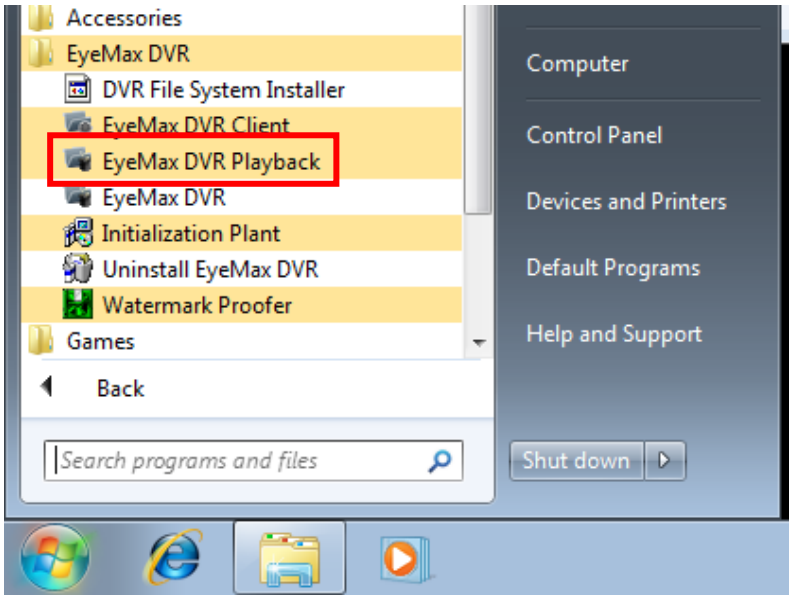

DVR Backup Wizard
Backup Information Confirmation
Click "Next" to start backup
User Location : Local
Server Infomation : None
Backup Time Period : 2005-03-16 17:04 ~ 2005-03-16 17:05 (channel 1)
Backup Device : TSSTcorp CD-R/RW TS-H292A TS02
Backup File Format : EXE File
< Back
Next >
Cancel

8. After completing backup, find the files created in the CD.



[Playback]

1. Click the “Start” button and run the “EyeMax DVR Playback”.
2. Select a folder (subfolder) to see saved data.

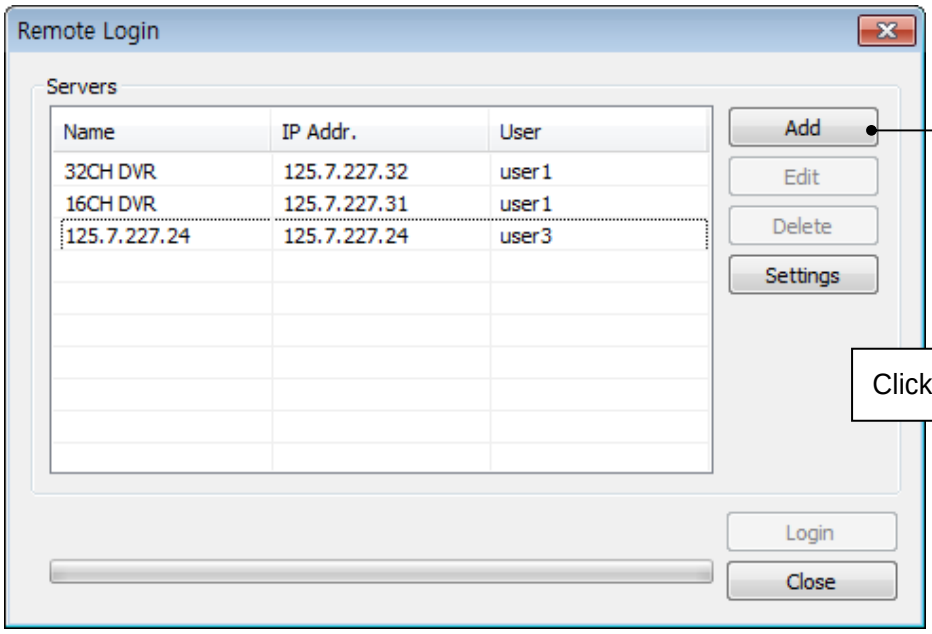


CHAPTER 6
Remote Monitoring System (Client)

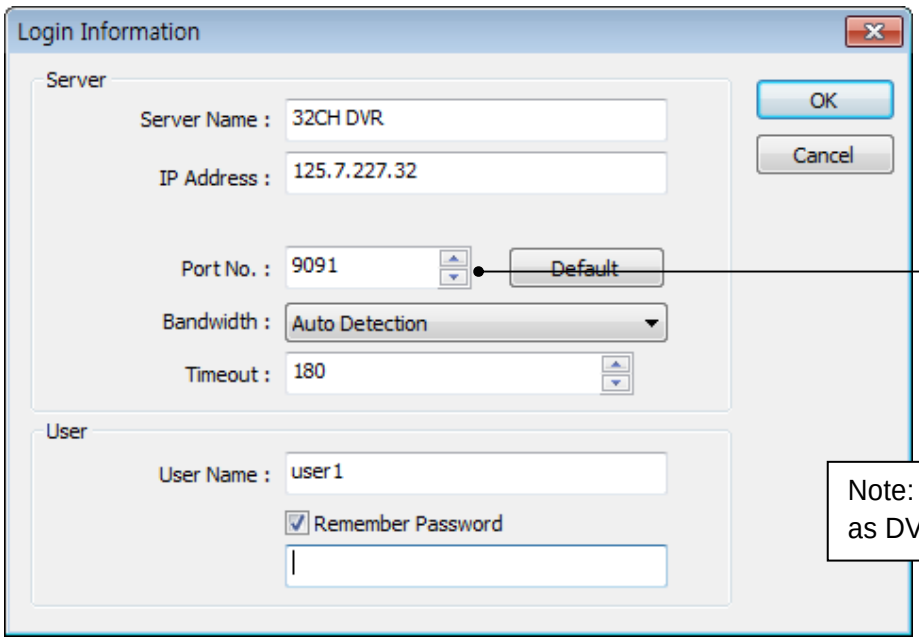
1. Remote Client Software

(1) Software Execution

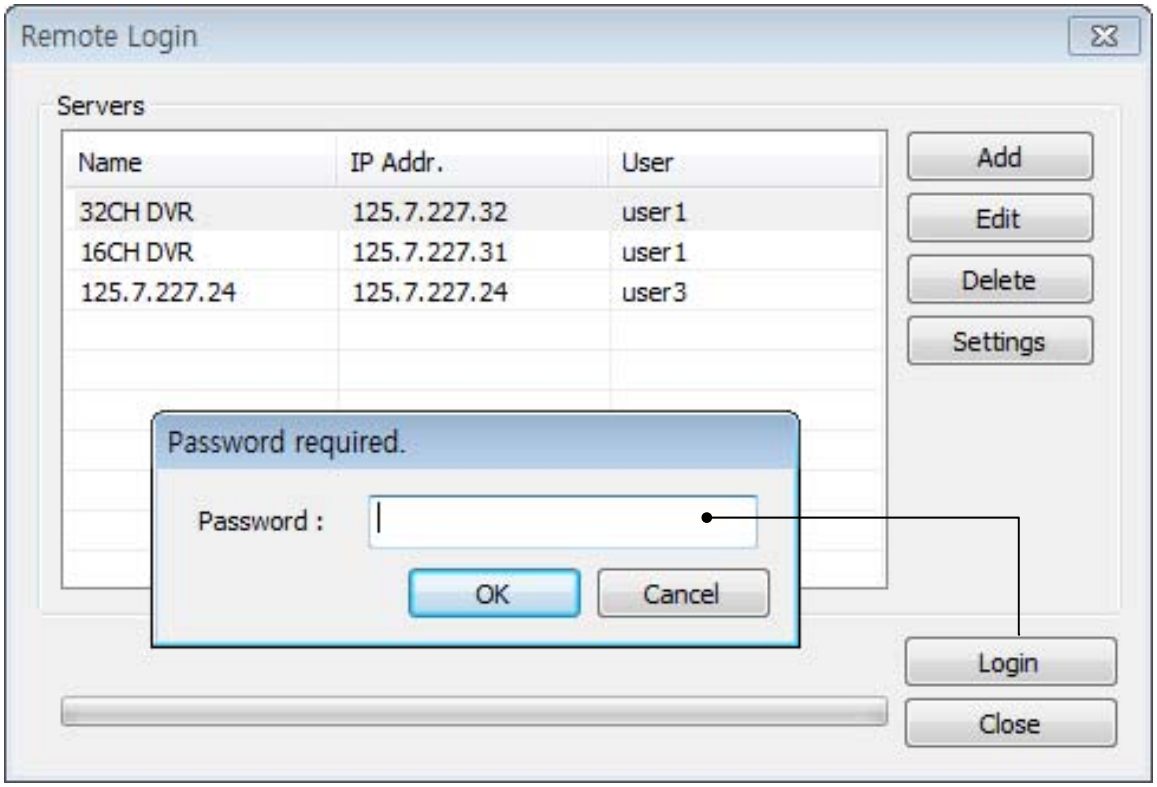
Double-click on the “EyeMax DVR Client” icon on the desktop to execute Remote Monitoring System (Client).



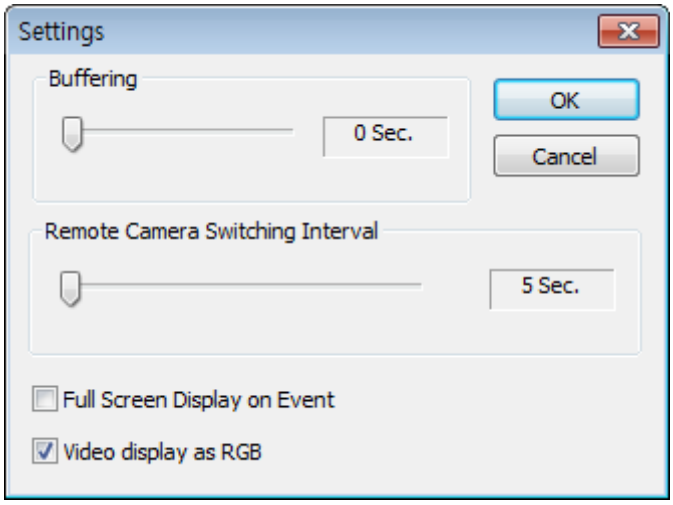
Click “Add” to register DVR servers.



Note: Make sure to put the same Port No. as DVR server.

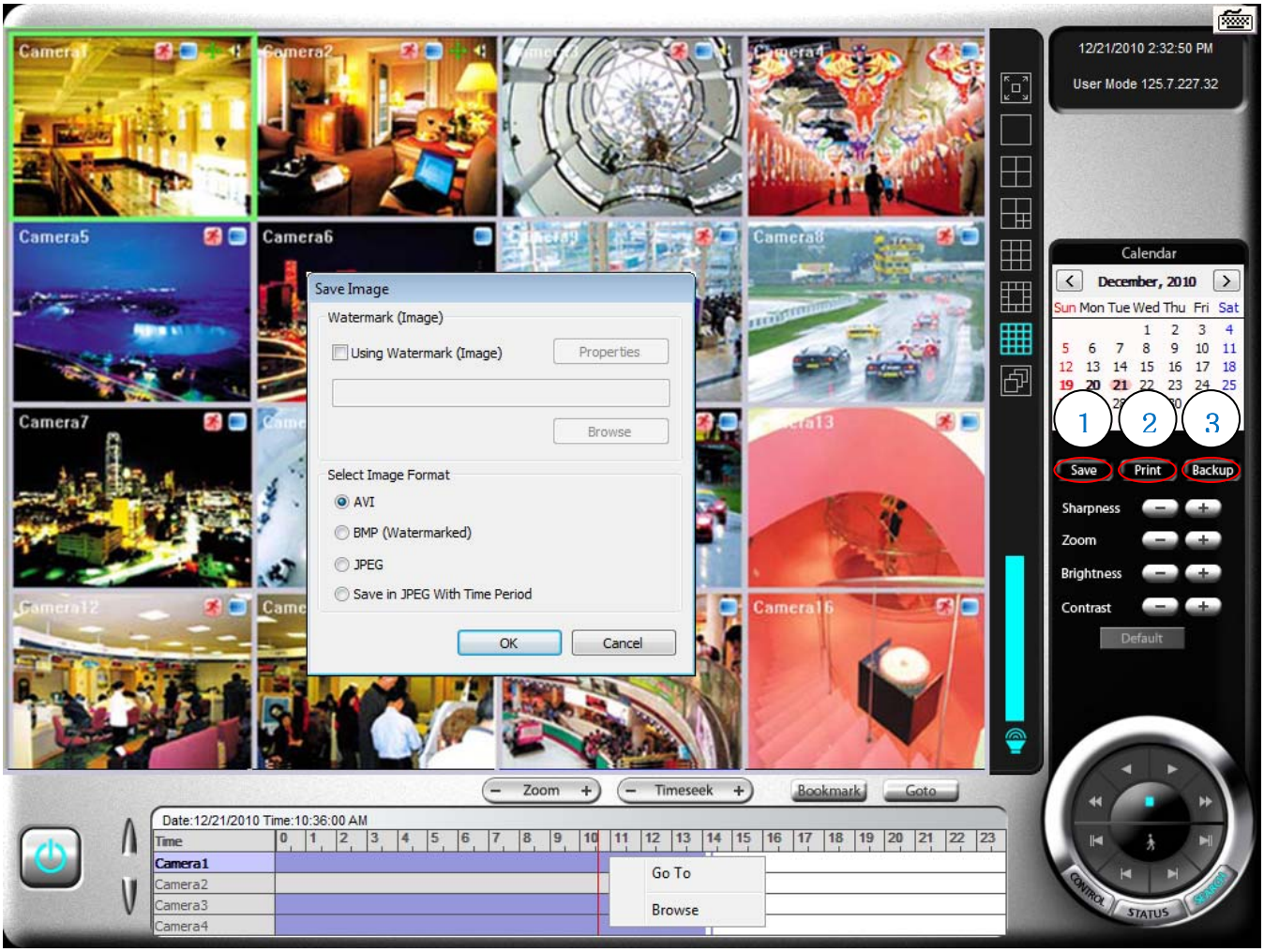


There can be more than one DVR server registered.
Select one from “Servers”, click on “Login” and type in password to log in.
Edit: Login info. changes can be made here.
Delete: Registered servers can be deleted with one click.



Full Screen Display on Event: If checked, full screen will be displayed on events.
Video display as RGB: if checked, video display will be shown as RGB type.
This function improves client display compatibility.

(2) Remote Save and Backup



1. Click “Save” button to save image as AVI, BMP and JPEG remotely.
2. Click “Print” button to print image of selected channel.
3. Click “Backup” button to remote backup
   The same procedure is used as “DFS / EXE Backup”.

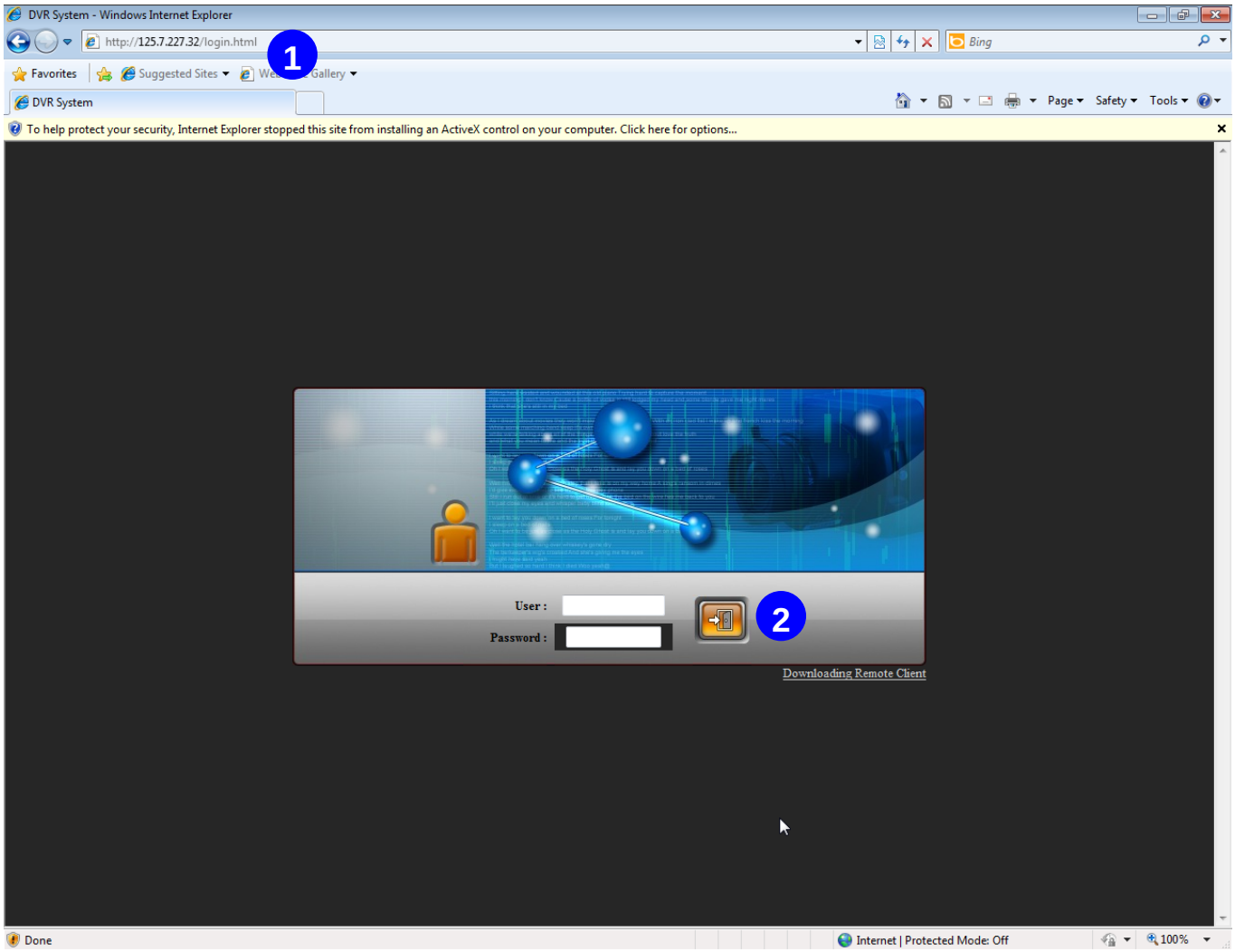
(3) Real Time Audio

Click the right mouse and select “Enable Audio” to hear real time audio.

Note: Changing “Setup” remotely can be done if remote user is “Admin” or “Admin Mode”.

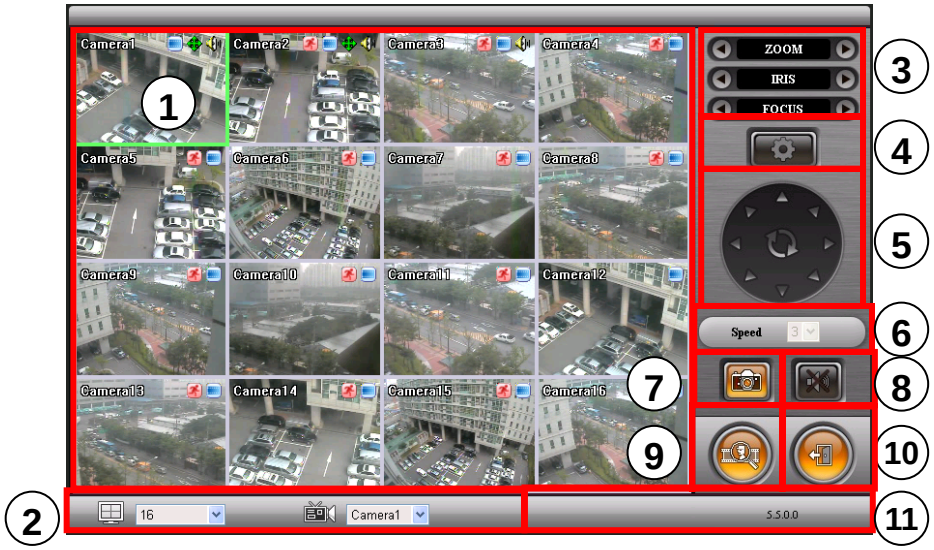
2. Web Viewer

(1) Software Execution



1. On the Internet explorer, type in the IP address of DVR server.
   - Install ActiveX control to continue.
2. Input User ID and password and then click login button to continue.

(2) Live Display



1, Live View

2. Screen splits and channel selection

3. Control Zoom, Iris, Focus

4. Advanced: Controlling preset, tour and E-map only for authorized users.

5. PTZ control : Only users with proper authority to control PTZ remotely.

6. Speed: PTZ speed control

7. To save live image to JPEG

8. To hear audio of a selected channel applied only for authorized user remotely

9. Mode change between Live and Search

10. Log In/Out or EXIT

11. Display version information.

(3) Playback

1, Searched Image

2. Date and time selection from recording data

3. Play back(Fast Forward, Backward play, Stop, Play, Fast Forward)

4. Save: AVI, JPEG, BMP

5. Audio

6. To change Tab to CONTROL

7. Log out and go back to LOG IN page

3. Smartphone Access

(1) Real Time Monitoring

If you can use Wi-Fi environments, you can view the real-time monitoring video from DVR with smartphone (iPhone, Blackberry, Symbian and Android)

① Run web browser at smartphone, and enter DVR IP address.

② Enter ID and password, and click “login” button the real-time monitoring screen will be shown.

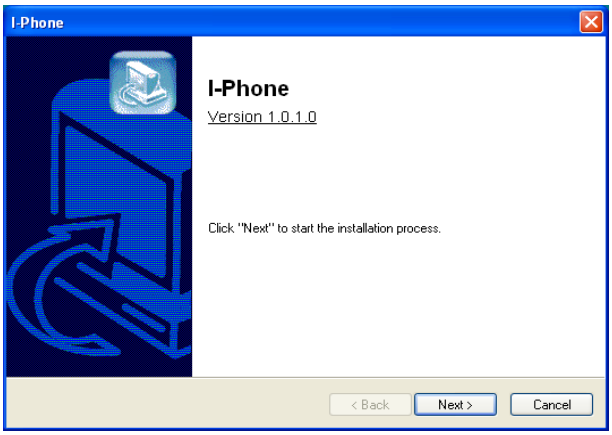
③ Real-time monitoring screen
1. Camera selection (CH1~16)
2. Video quality selection (Norma, High)
3. Video screen

Notice!: EyeMax DVR 5.5.4.0 version support individual Smartphone Application.
For detailed information, please refer to “i-Smart Viewer User’s Guide”

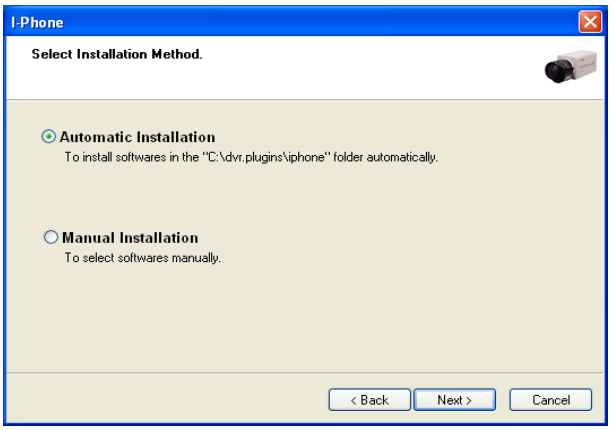
Appendix
Two-way Audio Communication

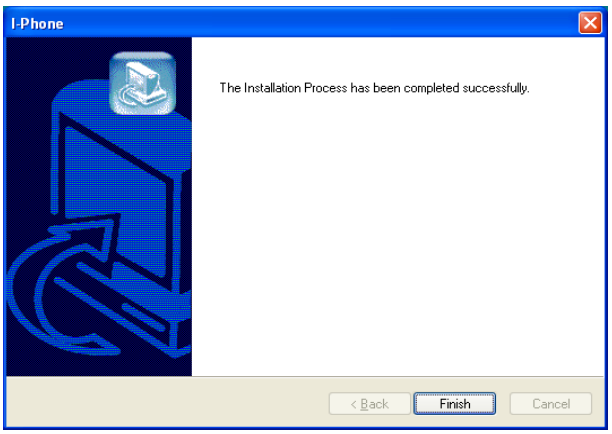
1. Installation

Any system used for “Two-way Audio Communication” must have static IP and “iphone(1.0.1.0).exe” must be installed.
For I-phone installation, double-click on “iphone(1.0.1.0).exe”.



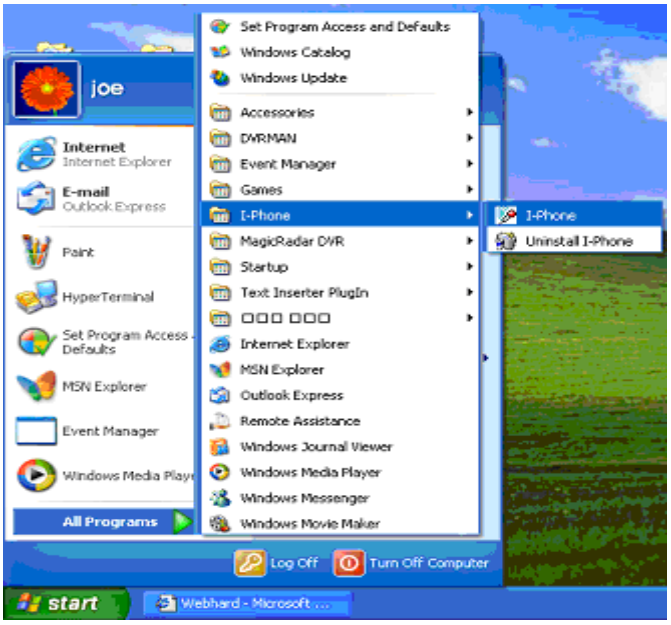
Click “Next” to start installation process and select “Automatic Installation”.





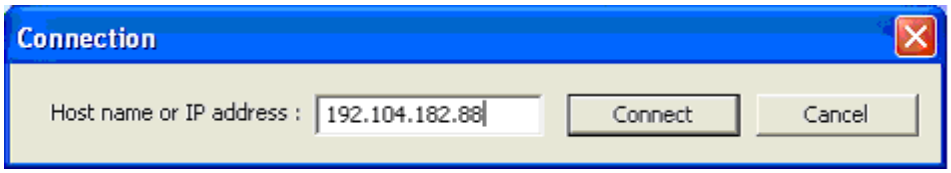
Click “Finish” to complete the process.

2. Execution

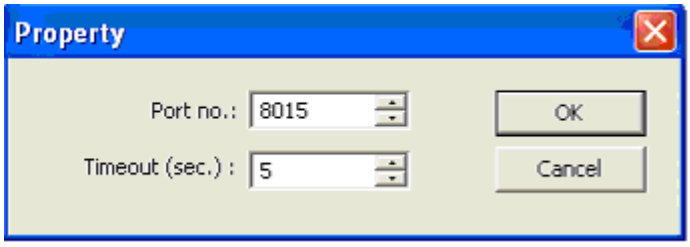


Go to “Start”, “All Programs”, find “I-phone” and select it for execution.

Find the I-phone icon at the right bottom and click it for the next step.

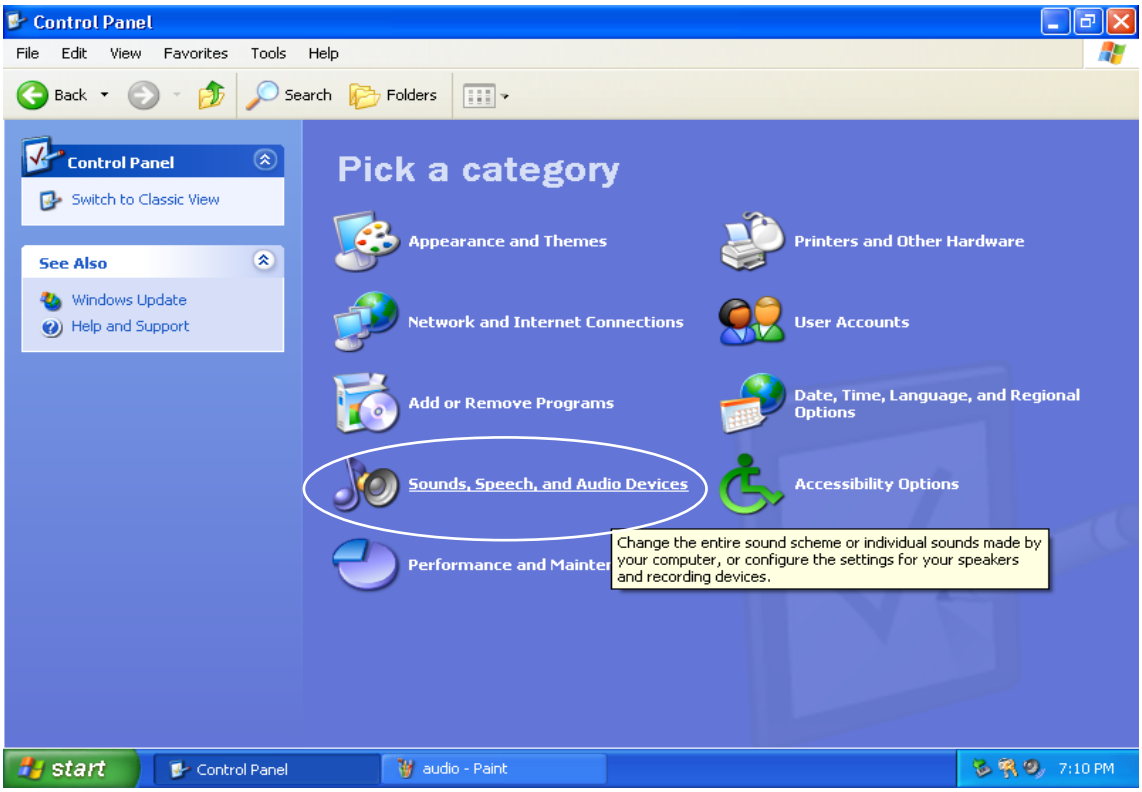


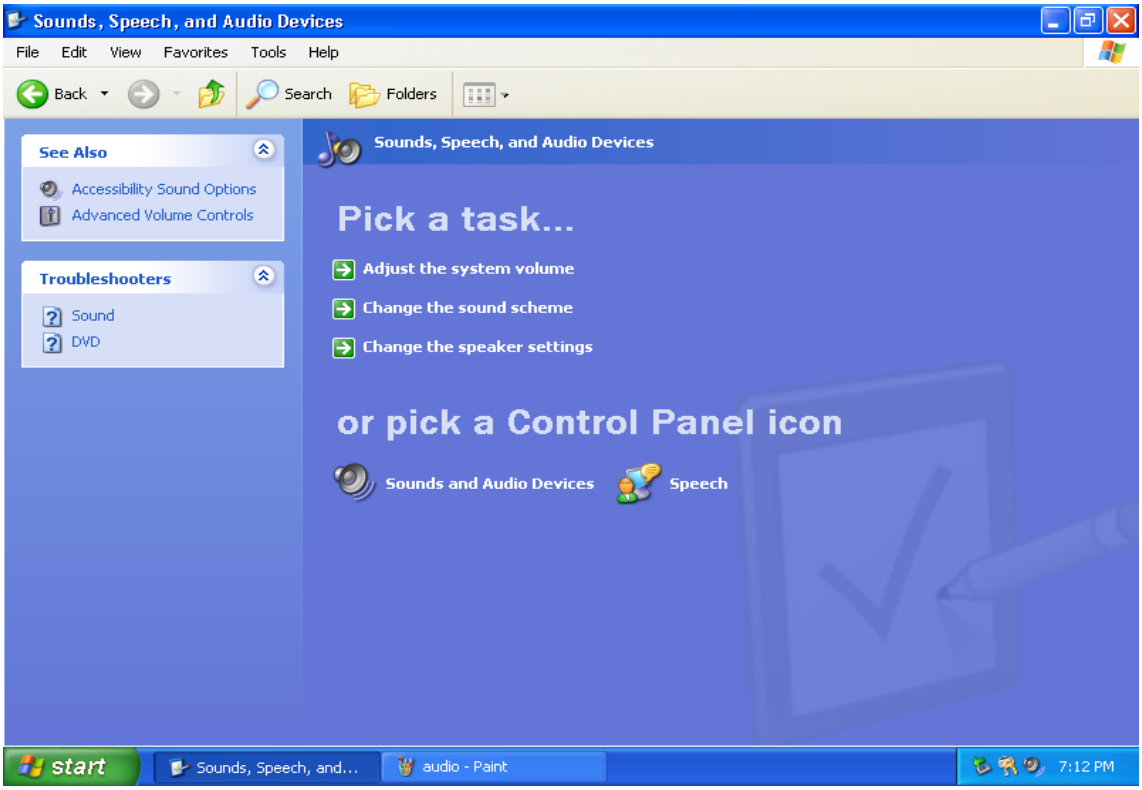
Select “Call” for Two-Way Communication”, type in IP address and click “Connect”.

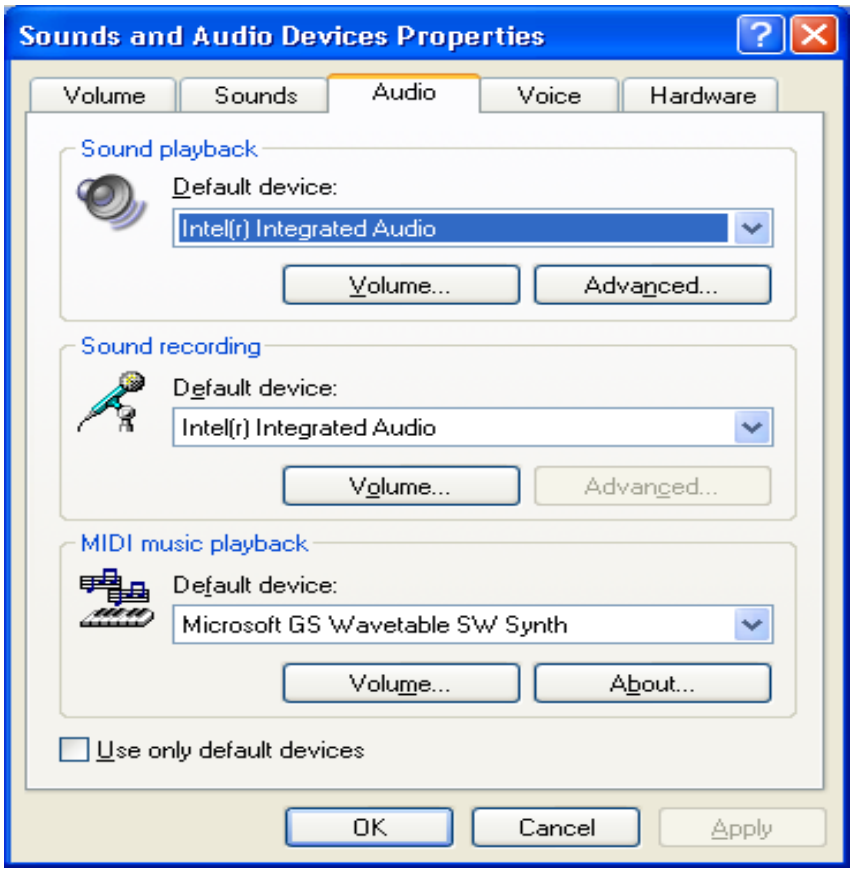


Property: The default port number is 8015 and the default timeout value is 5 seconds. Leave them as they are unless other values must be used.

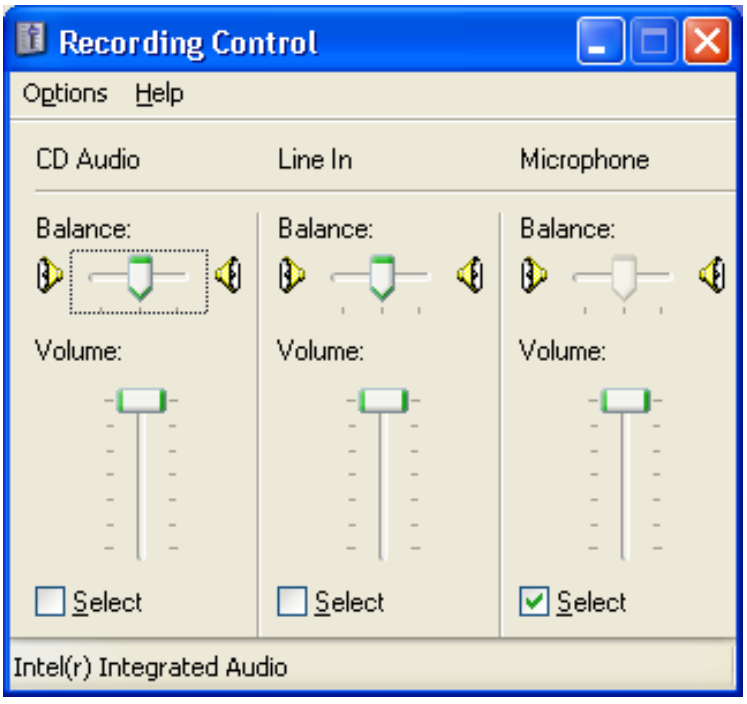
3. Audio Setup







Go to “Control Panel”, “Sounds, Speech and Audio Devices” and “Sounds and Audio Devices”. Then go to “Audio”, “Sound playback and click “Volume”.



Recording Control should be set up this way.